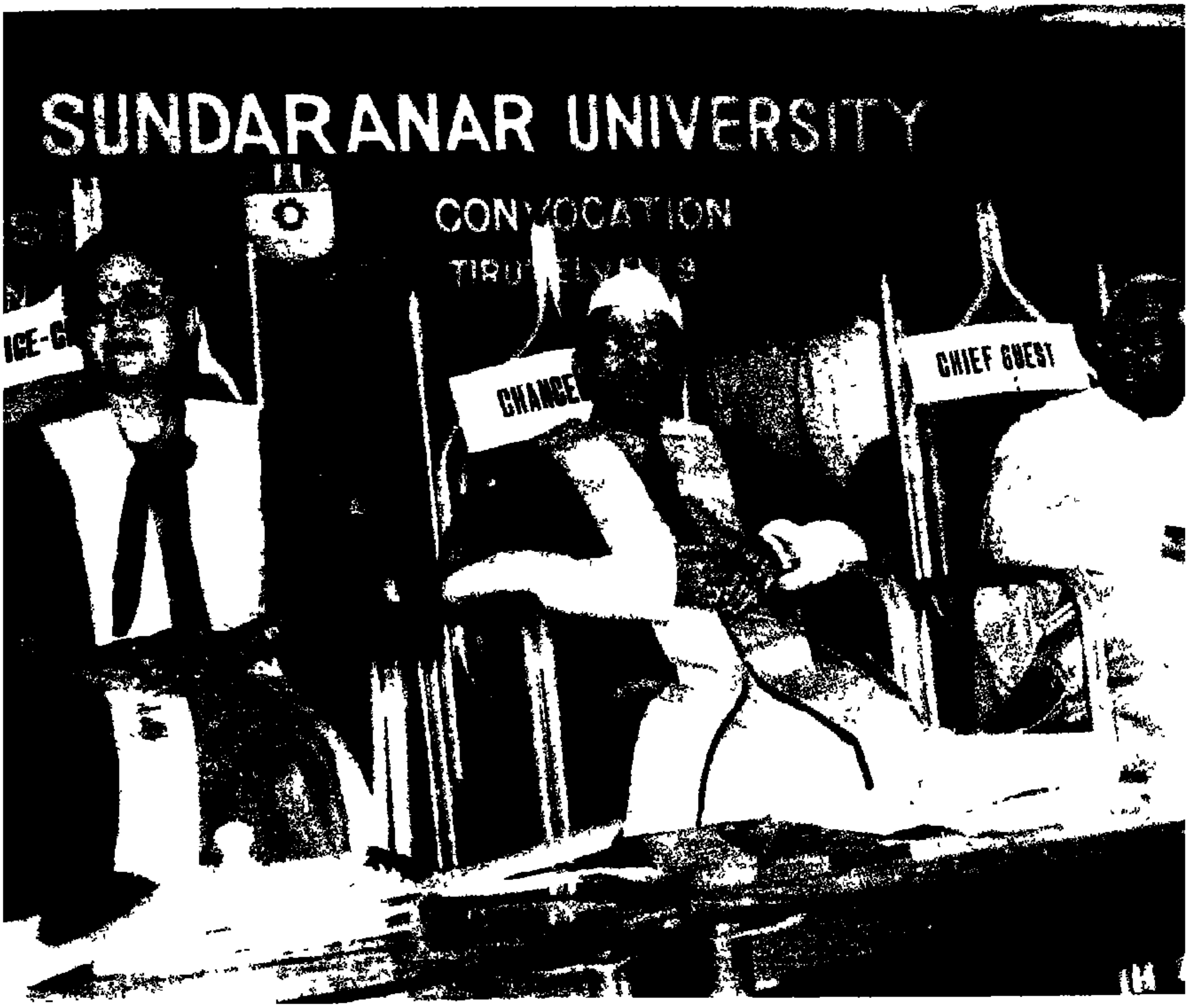
University News

MONDAY, APRIL 5, 1993 Rs. 5.00

MS Varsity Convocation



From L to R : Dr. V. Vasanthi Devi, Vice-Chancellor, Manonmaniam Sundaranar University, Shri Bhishma Narain Singh, Governor of Tamil Nadu & Chancellor of the University and Dr. K.R. Narayanan, Vice-President of India, who delivered the convocation address.

DAAD

Deutscher Akademischer Austauschdienst (DAAD)
German Academic Exchange Service (GAES)

RESEARCH FELLOWSHIPS AND SANDWICH-MODEL FELLOWSHIPS FOR STUDIES IN GERMANY, 1994/95

The DAAD annual fellowships for 1994/95 will be offered to the Government of India through the Department of Education, Ministry of Human Resource Development and the University Grants Commission. The Department of Education and the UGC will announce the fellowships in July/August 1993, after which application forms will be available from them. Applications should be routed through the proper channels.

The fellowships are for one year (preceded by a four month German language course). Applications will be invited in the fields of Engineering & Technology, Agriculture, Horticulture and Forestry, Veterinary Science and Animal Husbandry, Natural Sciences, Humanities & Social Sciences, Law, German Language & Literature.

This advance announcement is being made to give prospective applicants additional time, to get placements at German universities/research institutes.

Essential Pre-requisites for Both Types of Fellowships

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Candidates must be residing in India at the time of applying.
Candidates must have a recent-dated letter of placement from a German professor.
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Pre-requisites for Research Fellowships

Candidates must have at least two years of teaching or research experience.
Candidates must be permanently employed; employers must undertake to re-employ them on return.
Candidates should not be more than 32 years of age.

Sandwich-Model Fellowships

Open to scholars registered for doctorate degrees in India. The scholar can carry out research alternately in India and in Germany under the joint supervision of an Indian and German guide.

Pre-requisites for Sandwich-Model Fellowships

Candidates must be registered for their Ph.D. degree in India.
Permanent employment is not essential.
Candidates must not be more than 36 years of age.

For further information and questions regarding higher studies in Germany please contact:

German Academic Exchange Service
176, Golf Links, New Delhi - 110 003.
Telephones: 4615148, 4615009 *Telex:* 031-66471 DAAD IN

The DAAD fellowships for CSIR staff will be announced and circulated by the CSIR internally.

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Editor :
SUTINDER SINGH

Whither Engineering Education

C.R. Mitra*

A Sketch of Contemporary Reality

- Engineering was recognised as a useful art from antiquity. It was a body of knowledge acquired through pure empiricism and embodied a set of thumb rules. This was the age of craft technology, which was more organised than the period of chance technology.

- Engineering knowledge was transmitted from the master to the apprentice through a one-to-one correspondence. The mode of training was amplified through the agencies of professional societies which had started growing.

- But the major breach from the past took place when modern science through the spearheading of Physics permeated all thoughts and actions. Engineering was perceived basically as Physics in practice or in action.

- In due course engineering curricula emerged where the syllabus moved from handbook mode to a strongly science-based mode. It became possible now to direct efforts for the creation of desired technology.

- The standard engineering curriculum has certain features and components in terms of the following categories of courses :

  (i) Skills
  (ii) Basic Sciences
  (iii) Applied Mathematics
  (iv) Engineering Science
  (v) Humanities and Social Sciences
  (vi) Sister Engineering disciplines
  (vii) Thesis/Project/Design/Practice

  The current debate on the engineering curricula centers basically around two points, namely (i) how to teach design which is the kernel of engineering education, and (ii) what proportion is to be maintained between the course categories enumerated above.

- The education of engineering moved from professional societies, through non-university organisations to finally as part of the university system.

- Engineering curricula became distinctive in avoiding narrow specialisation, in demanding a broad scientific base and in prescribing a network of courses drawn from different disciplines. In fact, a typical curriculum in any engineering discipline would not devote more than 25% of all prescribed courses in that particular engineering discipline.

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- Above statement has remained always a challenge in engineering education. The second challenge modern engineering education consciously met is in the structured attempt to create a theory-practice symbiosis.
- In spite of the major shift in focus towards basic sciences, engineering education always informed itself on current industrial practice. In fact, it is a delicate balance which it diligently made between the demand of basic sciences and the imperatives of industrial activity.
- The Indian development in engineering education expectedly followed a path of imitating all profile of changes which took place in the advanced industrial countries of the world. More on this subject later.

What is Engineering?

- It is the art and science of organised forcing of technological change.
- It has learned from both science and technology and has informed both. It is the grand mediator between science and technology, and has generated the union called S&T.
- Engineering profession ultimately recognised certain engineering functions for an aspirant to look for career openings. These are listed below :

  Manufacturing or production

  Sales

  Development

  Design

  Research

  Teaching

  Consultancy

  While modern engineer is comfortable with science; his attitude towards scientific knowledge is different from that of the pure scientists. He seeks a purpose in science and uses science to become an inventor and an innovator. He should be adroit in scientific analysis but he can never leave synthesis which is the crux of engineering design. He has to go beyond the scientist and the technologist to be a creator of a new technological order.

  In short he has to develop the sense of discovery of experimental sciences, the aesthetic experience that higher mathematics offers and the intellectual creativity of engineering design.

Curricular Requirements

- A modern syllabus attempts to impart an understanding of a methodology which is the hallmark of engineering practice. There are subtle differences between this methodology and the methodology of science or that of technology.
- A particular curriculum is always contextual and is designed on a set of parameters which describe the general prior educational preparation of the freshman and ultimate professional role the graduate has to play. It is for this reason that one recognises the ultimate requirement which may be broadly pronounced in terms of whether to prepare a technician or a technologist or an engineer proper. It is this ultimate goal which determines the relative proportion of various components of courses the Programmes of Studies should include. It also clearly establishes the level at which a particular subject matter is to be treated in the curriculum

  In USA, because of the rise of engineering sciences, two categorisations are very prevalent – engineering or engineering technology
- Since the scope of every discipline in engineering has become stretchable it has taxed the imagination of the educational designers to offer structured curriculum in order to meet sometimes an opposing demand. It is always a delicate titration between theory and application, between research and design, between the requirement to create and remain custodian of technology.
- Irrespective of the uncertainties and dichotomies no engineering curriculum will be considered worthy if it remains confined to the academia without relevance to industry. In fact, the leaders of engineering departments in USA would be bold enough to enumerate what industry should need few years hence from the graduate it hires now

Distortions in the Indian Development

- Engineering education is a government monopoly Government is also the largest employer. In this closed-loop of education of an engineer and the employment of an engineer other forces like the market demands, etc. are only minimally present It is this situation which prevents a *de novo* look at what is to be taught and what the industry needs.
- All planning of engineering education and ultimate usability of the graduate is determined by normative approach of government bureaucracy without allowing any empirical data to be seriously sought For example, largely the Indian industry gives no

premium to a specialisation or postgraduate training in engineering. In fact, most of them would prefer a person who has facile ease in more than one engineering discipline and the related subjects. The chasm between what the university teaches and what reality exists in the field has been increasing while we are unable to even make a beginning to close this gap.

Instead of squarely meeting this problem, we have delightfully created profusion of Programmes of Studies and have ended up by designing training programmes through the ITIs, Polytechnics and engineering colleges. It is interesting to note that in medical education the licentiate training has been wound up but Polytechnic training has augmented in size.

Industry trains a fresh graduate once more through in-service training schemes. It often prefers to hire a diploma-holder instead of a degree-holder.

The relevance issue has been avoided. The education is bookish. It is no wonder that textbooks in engineering education hardly incorporate the Indian experience.

Engineering education in spite of its propensity to copy the curriculum of the best engineering departments in the world, suffers not only from a loss of identity but also from a loss of image. No wonder therefore, that there exists an internal brain drain where an aggressive person can comfortably leave engineering and move into management.

Urgent training needs have been identified in the wake of growth of service industry and the initiation of High-Tech industries. We have so far met the issue purely on an ad hoc and makeshift basis. We do not rightly know where to locate this new operative knowledge in the vertically differentiated programmes of studies for a degree, a diploma or a certificate.

Indian economy and Indian industry are moving towards globalisation. All institutions in the country will have to adjust to his change. Engineering education must welcome this development as a major challenge.

A Proposal for a Paradigm Shift

The above observations should be the basis of developing a strategy by which some meaningful changes can be brought about. Since the system which has been created is vast, the attempt to change should not cover the whole system. It is to be hoped that certain private initiative will come forward to establish new institutions which depart from the heritage and the precedence of a system developed by the government. Towards this objective a few desirable elements are offered below :

(i) The curriculum must relate the actual career demands that industry would be able to fulfil. Here, we have to ignore a transient and short-sighted view that industry often presents. We should be able to make a broad forecast of the technological order which is in the making in the country. Based on this forecast we should identify a few categories of useful careers for which we have to prepare the would-be entrants.

(ii) Instead of a vertical differentiation (ITIs, Polytechnics and engineering colleges) we should aim for horizontal differentiation between broad functions for which curricular aim should be committed.

(iii) Since engineering curriculum is the most imaginative curriculum existing for any professional discipline, we should aggressively offer the basis of this curriculum for curricular change in non-engineering subjects, particularly in science and management. Further, we should be careful how new interdisciplinary areas like software engineering, biotechnology, applied electronics, etc. are to be placed in the network of engineering faculty. Far too often these areas are neither treated as science nor as engineering.

(iv) A structured arrangement to relate classroom teaching to actual industrial practice for every engineering student must be achieved.

(v) No curriculum is complete if there is no demand for the student to obtain a hands-on experience in engineering design. Unfortunately, engineering design is largely treated as a set of exercises where the answer is known and engineering judgement is never demanded.

(vi) Engineering profession needs to be restored to the height of enabling activities. In order to do so a correct mix of courses in engineering curriculum has to be achieved. But more than a mere mix, the method of delivery of learning needs to be fundamentally altered by allowing inroads of current industrial practice in the nation into the academia. Simultaneously industry must learn to distinguish between today's requirement and future requirement.

Library Networks : Moving from Informal to Formal

Harsha Parekh*

Introduction

Networks mean many things to many people. Sociologists, social workers, computer scientists, telecommunication specialists, media personnel, librarians and experts in many other fields are concerned with setting up, maintaining or studying networks. Although the concept of a network as envisaged by these specialists is not identical, there is a considerable amount of similarity. It is perhaps this basic common core, that has led to the use of the same term in different contexts.

All networks imply a connection or a link. This linking can be between people, places, equipments and institutions. This connection can be achieved through conversations, messengers, roads, postage systems, bulletins, telephone lines, cables, radio waves, or any other media. The purpose of achieving this connectivity is to create an avenue for some kind of transfer of signals or messages or sharing of information, goods or services. The reason for seeking this transfer capability could be speed, a wider reach or access or perhaps enhancement of resources for mutual benefit. It is the very establishment of linkages that distinguishes a network, not the technique of achieving connectivity or its purpose.

In India, the University Grants Commission, under its INFLIBNET project is seeking to set up an information and library network between universities, colleges and other academic institutions. Like other networks this network too, can be viewed from several perspectives : the means or modes of linkages to be used, the content of the flow or transfer and the reason for achieving the connectivity. Due consideration to all aspects is necessary since the nature, direction and quantity of message and its flow has implications for designing the structure and modes of connectivity.

At present a loose and informal network exists between libraries. Information about the extent and nature of help and assistance libraries seek from each other through this informal network would yield information helpful in the implementation of INFLIBNET. At a seminar held in February, 1992 at SNDT Women's University to promote a general understanding of INFLIBNET among librarians, about 110 librarians from the Bombay-Thane region were present. This opportunity was used to collect information about the present network and librarians' views on INFLIBNET. A small questionnaire was distributed to the 110 participants. About half the participants – 61 – replied to the questionnaire. As Table 1 shows, 75% of the respondents were from academic libraries.

Table 1 : Distribution of respondents by types of libraries

Type of Library	*Number*
College – General	26
College – Professional	21
University	3
Special (Research)	9
Special (Company)	2
Total	61

The Existing Informal Network

Libraries were first asked to indicate how frequently they needed support from other libraries for a variety of listed reasons. Table 2 shows the distribution of frequencies for various reasons with a derived weighted total score shown in the last column. The table indicates that generally speaking, most libraries experience the need for support from other libraries only "some times". The existing loose, informal network between libraries is used for obtaining photocopies of journal articles, interlibrary loan of books, for fact finding and consulting information sources and for literature searching and referring to bibliographic sources. There is comparatively less dependent on other libraries for checking bibliographic details of books to be ordered, interlibrary loans of bound volumes of journals, for identifying books to be purchased or for help in cataloguing and classification.

Table 2 : Frequency of help sought from other libraries for various reasons

		Very Often	Often	Some times	Rarely	N.A.	Total Score
a)	Inter-library loan of books	7	11	34	8	1	137
b)	Inter-library loan of bound Journals	5	8	22	21	4	133
c)	Photocopies	11	13	20	15	2	138
d)	Fact finding and reference to information sources	7	13	26	10	5	129
e)	Literature searching and reference to bibliographic sources	6	15	21	15	4	126

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f)	Help in cataloguing & classification	1	4	10	38	8	74
g)	Identifying books for purchase	5	7	21	20	8	101
h)	Checking bibliographic details	5	12	21	17	6	115

When data is analysed by type of library, considerable variation is seen both in the extent of support sought from other libraries and in the reasons for the support. Total average scores calculated for different types of libraries (Table 3) indicate that professional colleges and special (research) libraries experience a greater need for help from other libraries than college, special (company) or university libraries.

The nature of help sought from other libraries also varies. College libraries depend on other libraries more for inter-library loan of books and photocopies while professional colleges need more help for checking bibliographic details, inter-library loan of bound volumes, photocopies and fact finding. University libraries, generally seek less help from other libraries though their requirement of inter-library loan of books is relatively high. Special (research) libraries ask for photocopies from other libraries and also seek their help in fact finding and reference to information sources. Special (company) libraries consult other libraries more for fact finding and photocopies than for other reasons.

Table 3 : Average score for different types of libraries

		Colleges	Prof. Colleges	Universities	Special (Research)	Special (Company)	Average
a)	Inter-library loan of books	2.12	2.19	3.00	2.56	2.00	2.25
b)	Inter-library loan of bound journal volumes	1.27	2.33	1.67	2.56	1.50	1.85
c)	Photocopies	2.00	2.24	1.33	3.33	2.50	2.26
d)	Fact finding and reference to information sources	1.85	2.24	1.00	2.78	3.00	2.11
e)	Literature searching & reference to bibliographic sources	1.92	2.19	1.67	2.56	1.00	2.07
f)	Help in cataloguing and classification	1.19	1.57	0.67	0.78	0.50	1.21
g)	Identifying books for purchase	1.62	2.14	0.67	1.11	1.00	1.66
h)	Checking bibliographic details	1.85	2.24	1.00	1.44	2.00	1.89
	Total	13.82	17.14	11.01	17.12	13.50	15.30

Libraries were asked to indicate priority-wise three types of libraries they depended on within the city. Ranks were weighted and the weighted scores indicate that generally speaking libraries depended on other libraries of the same type. Thus professional colleges would seek greater help of other professional colleges than other types of libraries (Table 4). The only exception were general colleges who depended more on universities.

Table 4 : Dependence among different types of libraries

Requesting Libraries / Helping Libraries	Colleges	Prof. Colleges	Universities	Special (Research)	Special (Company)
Colleges	44	7	65	18	6
Prof. Colleges	9	50	24	16	2
Universities	–	3	6	5	1
Special Research	3	16	8	24	–
Special Company	–	1	1	4	6
Total	56	77	104	67	15

On the whole however, university libraries were more heavily depended upon than other libraries. Help from professional colleges and special (research) libraries was more sought after than college and special (company) libraries.

When asked to name the libraries outside Bombay, which they depended on, only about 27% of the libraries did so. These were mainly special (research) libraries or libraries of professional colleges. Institutions named outside Bombay included national level bodies such as National Medical Library, Indian Law Institute, etc.

In addition to direct dealings between libraries, indirect support can occur when a number of users of one organization use the library facilities of another. More than 1/5 (13) of the librarians believed that members of their libraries were not usually members of other libraries, while about half (31) the group believed that few of their members also patronized other libraries. The remaining 28% (17) believed that a large number of their users also used other libraries. Users of special research and professional college libraries seemed to be more inclined to depend on other libraries in addition to their own.

INFLIBNET : Hopes for the Future

The general comments made by the respondents in the questionnaires highlighted their hopes and doubts about INFLIBNET.

The need and importance of a library network, such as INFLIBNET was reiterated in some comments :

"INFLIBNET will be very useful to the research workers and readers who find it difficult to get references required".

"The prices of foreign journals are increasing every year due to which it becomes difficult to purchase the relevant journals for our users. Some kind of resource sharing with reference to journals would be welcome. I hope the INFLIBNET project will introduce some way of achieving this".

"Our area of interest is considerably narrow; if INFLIBNET will cover all sorts of libraries within the network it should be possible for us to get our requirements fulfilled".

More than 20% of the participants commented on the need for a wide base for INFLIBNET, on the need to include all types of libraries of all sizes and with a wide range of subject interests. There seems to be a fear that the project would only be concerned with large libraries and that the needs of small libraries would be overlooked.

"In the network of libraries, government libraries, public libraries, etc. should all be included".

"INFLIBNET seems to be more relevant to libraries with bigger budgets and collections".

"It is far beyond the reach of a small college like ours".

"Consideration must also be given to small academic libraries, as they are the ones who are short of materials and funds and also have a lot of readers to cater to".

"Small college libraries should be included in this network. The University Library should take a lead in including affiliated college libraries in this Network".

"INFLIBNET should cover subjects not only at the University and academic level; there are subjects which are interdisciplinary. It is necessary to draw up library profiles when developing the steps for network".

Another set of comments focused on the structure and organization of INFLIBNET. The participants suggested that the INFLIBNET project be developed in a participative and open environment, with both practicising librarians and academic administrators being involved in decision-making and management levels.

"INFLIBNET should involve representatives of libraries at every level – including the local level".

"Active participation of college principals at the management and decision-making level is necessary so that the advantages of networking percolate to higher authorities.

The importance of disseminating and communicating information about INFLIBNET developments to librarians, principals and users was also stressed by many librarians.

"Detailed introduction of INFLIBNET should be communicated to all college principals".

"Librarians and heads of institutions should be continuously updated about the developments".

"Information about INFLIBNET should be made known to all libraries through some Newsletter or Bulletin, so that they can gear themselves for the network, when it comes".

"I would like colleges to be kept informed about INFLIBNET progress so that the college managements are financially prepared to accept it and make provisions early enough".

"Because INFLIBNET is for users, it should also be made known to them. Advertising will make the users as well as outsiders aware of such facilities"

A number of participants also stressed the need for training librarians.

"You should arrange seminars and short courses to guide and train the library staff".

"Refresher courses may be arranged for college librarians in computerization".

"Courses for imparting instructions regarding information technology should be conducted for librarians".

"Library staff should be able to get trained on computer usage and standard formats".

The comment of one participant seemed to reflect the hope and confidence librarians are placing in INFLIBNET.

"Yes, it must go ahead as it is positive librarianship Also we may have some by products which we may not have imagined or thought of".

The Formal Network

The existing pattern of interdependence between libraries and the comments of the participants provide some indications about the network contents and flow and for the structure and management of INFLIBNET.

Currently three kinds of movements are taking place between libraries. information, documents and knowledge and advice are being shared. Information which is conveyed between libraries can further be identified as (1) messages between libraries, (2) information about the holdings of libraries as revealed through their catalogues, and (3) information obtained from the documentary resources of the libraries. The envisaged E-Mail facility on INFLIBNET will be used for transfer of messages, while access to individual and union catalogues over the network would take care of the second movement.

The movement of information obtained from documentary resources of the libraries is considerably more difficult. Some documentary resources e.g. multi-volumed dictionaries, encyclopaedias, directories, statistical compendiums, bibliographies, indexes and abstracts may increasingly become available in the future in an electronic form such as CD-ROM. INFLIBNET envisages that the sectorial Information Centres would host some of these, particularly the bibliographic databases. The feasibility of making the other sources also available on the network, either through the Sectorial Information Centres or the Regional Centres needs to be examined. Perhaps some frequently consulted sources would even need to be made available at the University level. Access to other non-electronic sources would still require considerable human intervention.

The library providing the information would first need to locate the physical item, consult it to locate the information needed, and then arrange for its transfer. The physical transfer of documents is covered by INFLIBNET through the setting up of Document Resource Centres and the document delivery (Fax and non-Fax) and inter-library loan services. This activity will utilize the catalogues available on the network to identify the location of the book or journal and the E-Mail facility to send requisition messages. In addition it will need a mechanism for the actual delivery of documents. This could be E-Mail, Fax, Postal services or couriers. The size and nature of the document, its urgency, the distance to be covered, and the location of the supplying and receiving libraries will determine the actual mode.

Movement of expertise, knowledge and advice of librarians can also be speedily accomplished through E-Mail messages. Much of the existing networking between libraries and the resulting exchange of information and documents is due to the social network between librarians. The means of keeping the social networks of librarians alive and active need to be given consideration. The importance of informal linkages between librarians for the successful implementation of formal library networks cannot be minimized.

Movement of information on the network could be supplemented by movement of users. In many cases, when needs are still visceral and have not yet acquired a focus, researchers undertake personal browsing and scanning of documents. The review of the existing informal network did indicate that a large number of users were probably members of other libraries as well. INFLIBNET would also need to work towards making it easier for readers to visit other libraries, consult their resources, borrow documents from them and use their services. In the ultimate analysis INFLIBNET would be judged by users to have been successful only when librarians are able to present the different libraries to the users, not as distinct units but as a single, multi-campus academic library system.

The INFLIBNET project assumes the importance of the university library and envisages the creation of a University Union Catalogue. It is further envisaged that the individual college and departmental libraries will contribute to this union catalogue as well as access it on a regular basis. Responses to this questionnaire, also reflect the central role of the university libraries and the dependence of other libraries on their collections. More noteworthy is the horizontal dependence between libraries of the same type and in the same locality. This horizontal dependence is greater in the case of special professional college libraries whose need for external support is greater. This would seem to indicate the very important role of the union catalogue of each university. It would need to be as complete as possible, including special collections available in small academic libraries.

Critical to the connectivity of libraries at the national level is the networking of units at the local level. The success of INFLIBNET depends as much on the strengths of inter-university linkages as inter-university or inter-regional connections. The initiative and leadership of a university, the commitment and involvement of college management and cooperation among librarians would all be necessary in setting up an effective network of local libraries. A lead by university libraries in developing the existing linkages into formal local library networks would support and complement INFLIBNET and establish to the academic community the benefits accruing from improved connectivity.

Management of the network at the national, regional and local levels – is another important but complex issue. The network will involve libraries in different types of institutions. These libraries work within different organizational climates with varying levels of functional autonomy and serving different types of user needs. The management of the network should include mechanisms for obtaining and understanding the perspectives of users, librarians and managements of these institutions and for disseminating information to these groups.

The goal of INFLIBNET is to bring libraries closer, to make the collections and services of libraries accessible to a wider group of users. Skill, imagination, motivation and effort of a large number of people will be necessary in reaching the goal.

Effectiveness of IGNOU ETV in Different Telemodes Under Conditions of Sex, Habitat and Medium of Instruction

D.R. Goel*
Dibakar Sarangi*

Rationale

Telemedium in educational horizon is finding increasing importance either for excellence or for quantitative expansion. Even in formal classes of training and instruction, telemedium is playing no less significant role. But the present tele-teach system is probed with questions for the real pedagogical significance on the grounds of expected influence on the learners. The one track flow of information may defeat the larger goals. There is a need to incorporate the students-teacher interaction in the process towards an increased return of the medium. Such interactions could possibly be provided either in Interactive or in Talk-Back modes. But adequate empirical evidence on the functional relationship of the different telemodes, sex, habitat and medium of instruction is not available to ensure the effectiveness of the ETV programmes. Besides this, since tele-medium plays a pivotal role on IGNOU's network of the learning resources, it was quite necessary to explore how would the Indira Gandhi National Open University (IGNOU) ETVs influence the viewers' achievement in different telemodes, namely, Direct, Interactive and Talk-Back under diverse conditions of sex, habitat and medium of instruction.

The study purports to meet the following objectives :

1. To find out the comparative effectiveness of the IGNOU ETV programmes in terms of achievement of English and Hindi medium students.
2. To find out the comparative effectiveness of the IGNOU ETV programmes in terms of the achievement of the rural and urban viewers.
3. To find out the comparative effectiveness of the IGNOU ETV programmes in terms of achievement of male and female students.

Corresponding to these objectives the following Null hypotheses were framed :

1. The mean achievement scores of English and Hindi medium students on the IGNOU ETV programmes will not differ significantly.
2. The mean achievement score of urban and rural students on the IGNOU ETV programmes will not differ significantly.
3. The mean achievement scores of male and female students on the IGNOU ETV programmes will not differ significantly.

The study involved a non-equivalent pretest-treatment-post-test classroom experiment with the IGNOU ETVs as the independent, viewers, achievement as the dependent and telemodes as the treatment variables. The intervening variables included were sex, habitat and medium of instruction.

The sample of the study comprised :

1. Sample students.
2. Sample IGNOU ETVs.

150 B.Ed students (1991-92) of Institute of Education (IOE), Devi Ahilya Vishwavidyalaya (DAVV), Indore participated in the experiment. The sample for each IGNOU programme was different against different telemodes. Since students present on the spot on the day of data collection, were used as sample, the number of students along the levels of sex, habitat and medium of instruction was self-determined.

The following seven IGNOU ETV programmes were selected in the study : 1. Maintaining Quality, 2. In search of History, 3. Figures of speech, 4. Computer Software, 5. Communication in office, 6. Methods of Science, 7. Library Cataloging Practice.

Tools

Self-constructed achievement tests with objective items on each of the seven sample programmes were used for data gathering. For constructing these tests analysis of the instructional programmes was done in terms of objectives and contents.

Data Collection

One third of the group was allowed to view the ETV programme interactively. During viewing, whenever questions were raised by the viewers, the video cassette was paused and the queries were being responded to either by students or by the investigator. Prior to viewing and after, pre-test and post-test were administered. By the rest two-third of the group after pretesting in the first phase, the programme was viewed in direct mode without any interaction. At the end of direct viewing post-test was administered. In the second phase students talked back to the resource person (The investigator) on their queries to clarify their doubts. Then the same test was administered as post-test. Phase-1 and phase-2 constituted the talk-back mode. Duration in both the talk-back and the interactive mode was equal.

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* *Institute of Education, Devi Ahilya University, Indore.*

Data Analysis

Data were analysed programme-wise through 't' test.

The findings are presented as follows :

Objective-1 : Medium of Instruction, Telemodes and Achievement

(i) *Direct Mode*

- was equally effective in four IGNOU ETVs,
- favoured the English medium learners twice,
- Favoured the Hindi medium learners once.

(ii) *The Interactive Mode*

- was equally effective in five out of the seven IGNOU ETVs,
- favoured both the English and the Hindi medium learners once each.

(iii) *After Talk-Back Interaction*

- three IGNOU ETVs were found equally effective to the Hindi medium and the English medium learners,
- favoured both the English and the Hindi medium learners twice each.

Thus, discriminated achievement against the medium of instruction of learners was not overpowered completely through any of the telemodes. However, the differential achievement in the IGNOU ETVs was the least in interactive mode.

Objective-2 : Habitat, Achievement and Telemodes

Objective -2 examined the effectiveness of IGNOU ETVs in terms of the achievement of the rural and the urban viewers.

(1) In *direct* mode teleteaching, only two out of the seven IGNOU ETVs were equally effective to both the habitat groups.

With respect to gain in achievement, the rural-urban discrimination was marked in 5 out of the 7 IGNOU ETVs (Programme S.No. - 1,3,4,5,6) and the direction of such difference was :

(i) The urban group > the rural in three programmes (S.No. 3,4,5) (in terms of achievement).

(ii) The rural group > the urban group in two ETVs (S.No. 1,6) (in terms of achievement).

(2) But after the *talk-back interaction*

- The initial urban-rural difference; created during direct mode, was compensated in three IGNOU ETVs (S.No. 3,5,6).
- Directional changes in difference were induced in the urban-rural discrimination originated in direct mode of teleteach :

urban group >the rural changed to rural > urban (S.No. 4)

and rural > urban changed to urban > rural (S.No. 1).

The initial equality of gain in achievement (mean gain of urban = mean gain of rural) was retained (S.No. 2,7). Thus to conclude :

The Talk-back mode, although not equally effective in many IGNOU ETVs, was found potent enough to compensate "The achievement lag/The learning lag with respect to habitat" created during direct telemode.

(3) In interactive mode six out of the seven IGNOU ETVs were found equally effective to both the habitat groups.

- The urban-rural discrimination in achievement was observed in one IGNOU ETV only.

Objective-3 : Sex, Achievement and Telemodes

Objective -3 was to find out the effectiveness of the IGNOU ETV programmes in terms of the comparative achievement of the male and the female learners attending the different telemodes.

(1) *Direct Mode :* In two IGNOU ETVs, students were discriminated in their gain in achievement against their sex. The direction of such difference was :

The males > the females (S. No. 1) and the females > the males (S.No. 4).

In rest five IGNOU ETVs, direct mode was found equally effective (in terms of male-female achievement) to different viewer groups.

(2) *Talk-Back Interaction* compensated the differential influences of sex on achievement (that existed in direct mode). Thus, all the seven IGNOU ETVs, were found equally effective to both the male and the female viewers.

(3) The *Interactive* mode was equally effective to both the sexes in terms of viewers' achievement. However, in one programme (S.No. 1) sex differentiation was observed in favour of males.

Energy Education : Strategy for Sustainable Development

K.C. Sahoo*

Global Energy Crisis

The global energy state has entered a very crucial phase. Though in principle the limits of conventional sources of energy were well known much earlier, it is specifically the sudden price hike by OPEC in 1973 which shook to the world at large. Both developed and developing countries realised for the first time that the quality of life and the amount and speed of development have been subject to the availability of energy to them. Not only for the nation, but also for the individual energy has become a critical factor in all walks of life, be it a problem of cooking, heating, illumination, pumping, lifting or movement. If somewhere it is for meeting the requirements of food, fodder and fuel at some other place it is to run the industry. The massive demand has brought before us a global energy crisis.

Why Energy Education?

A critical analysis of the global energy crisis reveals that the shortage of stock is less critical than the shortsightedness of the users. In many a case it is found that energy is either misused of unused; the reason being mostly the ignorance and irresponsible behaviour of the users. The same stock of energy can be prudently managed for more useful work and for longer period with a little bit of knowledge and careful behaviour. However, alternative sources of energy can also be thought of.

Energy as an essential input for economic development and quality of life requires to be managed in the most efficient and wise way. Otherwise the future seems to be bleak. Whether wise decisions are made about energy and limited resources are used in a sensible way will depend greatly on the way young people are educated for the future.

For implementing effectively various programmes and policies of energy, it is necessary to have an energy conscious society. To catch them young for this purpose, the starting point for this will be educational institutions. This necessitates the incorporation of energy elements in school and college level curriculum along with the orientation of the teachers. Besides, the development of energy education material for public at large is also required.

To review, the status of research and development in the subject in general and material development in particular, no significant work has been done so far in any part of the globe. However, the authors on energy do talk of the energy crisis and need for developing awareness among the citizens. Here are a few such references; Goldemberg et al. (1988) in *Energy for a sustainable world* tell about scarcity of energy and over dependence on fossil fuels and nuclear power ultimately resulting in environmental and security problems. It presents a normative end-use oriented approach to the energy problem without the expansion of energy supplies.

John C. Fisher in *Energy Crisis in perspective* (1974) points out that world energy activities from discovery through recovery, transportation, refining, distribution and use, etc. are moulded by tremendous outside forces of supply and demand and develops a conceptual framework for future thought and action.

John L. Helm (ed.)'s *Energy : Production, Consumption and Consequences* (1990) examines the evolving structure of our energy system, explores the changing patterns of supply and demand, offers insight into the forces driving the changes and discusses energy planning strategies.

Brundtland Comans Report (1987) tells about our Common Future and Sustainable Development.

K.N. Subramanya, (ed)'s *Energy Problem and World Economic Development with special reference to India* (1983) discusses the energy crisis in the global context in general. In particular it mentions India's Energy Profile and country's effort to cope with the energy crisis. The contributors have, indeed discussed the policy options at great length emphasising in the process, the importance of renewable sources. A deal is also made with various new sources of energy ranging from thermal to tidal and wave energy which are relatively new and possibly less explored areas generating special interest for the energy planners.

The situation in respect of researches done in the area of energy education and development of teaching-learning packages is also not much different. Today except for a couple of references on the nature, concept and scope of energy education there is no reference

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available as to the development of material in the area of energy education. However, some appreciable efforts in the area of energy education in general are as below :

Gujarat Energy Development Agency (GEDA) has attempted to develop creative approaches to energy education; Multi-Media Energy Education Packages in Gujarati languages and extensive teacher training programmes. Beena Shah's *Energy Education* (1990) presents the concepts and scope of energy education, and some course contents to be adopted at primary, secondary and tertiary levels of education.

Some Suggested Measures

Consumer behaviour is highly required to be modified and sooner the better. It is a matter of serious ethical and attitudinal concern. People are yet to realize the significance and value of right to produce against right to consume. Creation and expansion is life, consumption and contraction is death is still to be understood properly. Creation of artificial wants must be curbed at the root. Austerity in life must be promoted. Wasteful behaviour out of whims and fancies and extravagance in life should be discouraged at all costs. Eliminating waste is the first step towards a sustainable society. Common sharing solves a lot many problems.

Knowledge about various alternative sources of energy other than conventional viz. Solar, Tidal, Geothermal, Hydroelectric, Photovoltaic and other renewable sources would be a great insurance against the crisis. People have already started using these resources. Simple solar collectors are now to be found heating water in over two million Japanese buildings and, within ten years, the Japanese expect a third of their buildings to be equipped in this way. Sixty companies in twenty countries are now producing photovoltaic cells which convert sunlight directly into electricity. Water pumps in Tunisia, electronic calculators in Europe, medical refrigerators in Africa and telecommunication systems in Papua New Guinea are now all powered by Photovoltaic electricity. By the middle of the next century as much as a third of the world's electricity could come from the sun.

These options only scratch the surface of what is possible. Brazil supplies nearly twenty percent of its transport fuel with alcohol derived from sugrarcane grown as an energy crop. In China, biogas plants, which convert animal manure into methane, supply the equivalent of 22 million tonnes of coal a year. Twelve percent of Munich's electricity comes from burning garbage and other wastes. France has identified 90,000 potential sites for small-scale hydroelectricity generators. The Soviet Union planned to deploy 150,000 wind turbines by 1990. In the United Kingdom, experiments are underway to tap the heat of the rocks that lie beneath our feet. Though at infancy stage, the solar cookers wind mills, solar heaters, biogas plants, waste recycling, etc. are well in operation in India.

It is now quite clear that there is no shortage of energy, only of the means to make use of it. Throughout the world scientists, energy planners and investors are now beginning to explore seriously the potential of renewable sources of energy. As more research is carried out and more investment made, new opportunities are being discovered and costs are falling.

Energy efficient technology and its know-how can be promoted in different sectors, formal and non-formal, and primitive ways and means avoided.

The message of 'Energy conserved is energy produced' should reach the user with all speed and force and for this purpose all possible media – audio-video, and print, etc. should be channelised. It is now wisely acknowledged that avoiding wasteful and inefficient use of energy in all sectors whether domestic, commercial, agricultural, transport or industrial, could not only provide substantial relief from the prevailing energy shortages but also save environment from the adverse impact of increasing use of fossil fuel such as coal, oil, etc. Sagacious domestic energy decisions help a lot for the cause.

Gradual decentralized energy efficient policy of the Govt. of India i.e. Integrated Rural Energy Planning (IREP), Energy Audit System, Financial subsidies for demonstration and programmes on energy efficiency improvements and technologies, assistance for energy conservation projects, establishment of energy villages, incentives for use of solar cookers, solar illumination, solar heating, biogas plants, improved smokeless chullah, etc. are some of the positive measures in the context. If implemented in true spirit, this would go a long way in meeting the energy demands of the nation and helping the great cause of national development.

References

1 Fisher, John. C (1974) **Energy Crisis in perspective.** John Wiley

2. Goldemberg et al (1988) **Energy for a sustainable World** Wiley Eastern

3. Helm. John. L (ed) (1990) **Energy: Production, Consumption and Consequences.** Washington, National Academy Press

4. *India 1991: Govt of India, New Delhi.*

5. Shah. Beena (1990) **Energy Education.** Northern Book Centre, New Delhi

6 Subramanya. K N (ed) (1983) **Energy Problem and World Economic Development, with special reference to India.** New Delhi, Deep and Deep

University as an Instrument of Development

"A university is today not only a place for education but it is an instrument of development. We are living in a developing society with immense problems of development, of poverty alleviation as well as of development of the very basic education itself and therefore the university has to play the role of an instrument for development", said Dr. K. R. Narayanan, Vice-President of India. He was delivering the Convocation Address of the Manonmaniam Sundaranar University, Tirunelveli. Excerpts

Today, for a person to be really educated one has to be knowledgeable not only in classical subjects like literature, the arts, history etc., but also in scientific subjects. In the old days, a person was known to be educated and a scholar, only if he had deep knowledge of classics, classical language, of sastras of our country, may be Latin and Greek in the European countries. But today a real scholar should have, in addition to this classical knowledge of modern sciences. Then only you get a completely educated person. It is this combination of Humanities with Science and Technology that is going to be the unique feature of the new education in the world today.

Of course, a university is today not only a place for education but it is an instrument of development. We are living in a developing society with immense problems of development, of poverty alleviation as well as of development of the very basic education itself and therefore the university has to play the role of an instrument for development. How we can combine the old academic traditions of a university together with these modern responsibilities of development is a challenge to all educationists. It would be a pity if for practical purposes, we dilute the education of real knowledge or the acquisition of real knowledge. But at the same time if a university is not to be an ivory tower but heart of the society, then you have to have both. Today universities are not mere ivory towers either. They are over-crowded ivory towers. There, neither the faculties nor the students have any peace of mind for thinking quietly or deeply about life.

First of all, the emphasis has to be on education itself. At the same time we have to find methods of fulfilling the social responsibilities that teachers and students have towards the society as a whole. Extension work is the medium through which we can engage in developmental activities while being a student or a teacher. There are institutions like the N.S.S. which are very active here. But I find that most of the activities of N.S.S. and similar organisations are for a kind of elitistic extra-curricular work such as sports, and programmes of literacy. Literacy is not elitistic but it is one of the peripheral activities in a sense, because you don't have to do any manual work while carrying out literacy programmes. Whether in carrying the message of environment to the society or in much adventurous sports or other kinds of activities of extension work there is no manual work involved. I am of the opinion that as a society India has shunned manual work for ages. We have relegated it to an inferior position and one cannot really become part and parcel of the living society of the country unless educated people, like the ordinary masses, are prepared to do some manual work, alteast in order to give themselves satisfaction and in order to contribute to social development.

I have come across a story while I was in Japan. One very enthusiastic young man had heard of a great Guru and he wanted to know from him the secrets of life. So he travelled a long way and went to Guru's house. As soon as he went there he asked, "Guruji, I want to know the secrets of life". The Guru said "Youngman, you have come a long way. You have a bath". So he had a bath and then he went and again asked the Guru, 'What is the secret of life?' When he asked, it was almost lunch time and the Guru said 'Let us have lunch'. After lunch, the youngman again put the question, and the Guru said, 'now let us wash the dishes. This was his final answer with regard to the secret of life and he had in this simple advice showd him that doing work, doing your responsibilities and working with your own hands is really the secret of life. I think this has to be taught to our students because we are becoming increasingly alienated from our people, and educational institutions have become instruments of alienation. When one might be coming from a village, one's parents may be ordinary labourers. But once coming to the university, you become a different person. Maybe very often, when you go back to your village, you find it difficult even to adjust to your parents and to your neighbours. Education should not be another method of getting alienated from the society. That is why I think extension work is of supreme importance and this should include working in the villages or towns among people dealing with their actual problems.

The menace of communalism is shaking the whole of our country, and there are new interpretations of our basic philosophy and our constitutional system. Therefore, it is incumbent on the university, on teachers and students, to devote attention to this basic philosophy of life, approach to life, which we have inherited from the freedom movement and which we have embodied in our Constitution. India is a very religious country and one ought to be proud that we are a religious people. But, religion is for harmony, for understanding among people, for co-operating with one another and reaching the Godhead through that process. But, it has become a divisive force in society today.

I want to narrate what Gandhiji once said. Gandhi was a true Hindu. He believed in Hinduism. But at the same time he respected and believed in all the great religions of the world. He said something about which I should like to quote here today. "Let me explain", he said, "What I mean by religion. It is not the Hindu religion, which I certainly price above all other religions, but the religion that transcends Hinduism, which changes one's very nature, which binds one indissolubly to the truth within and which ever purifies". While he was deeply attached to Hinduism, he had projected religion as something transcending Hinduism and embracing the basic principles of all religions, which has really been the Indian heritage throughout our history. And the challenge for us today is to preserve this heritage and not to be diverted by narrow and dogmatic interpretations of Hindu philosophy or Hindu practice. There is a great deal the universities can do in this respect and the basic thing is tolerance, which you can put in more modern terms as a scientific approach. Therefore, when I talk about tolerance, I am not using the word as some old phraseology, but it is in the modern sense of scientific approach to problems of society and problems of life.

The great bane of our society has been our disunity. We have, since independence, built up a very impressive structure of united India and there are many special aspects to it. Though India was divided, the part of India that we got became not only administratively but politically, economically, socially and to a large extent emotionally one nation and that process has been going on. But, from time to time we have relapsed into disunity. Here, I should like to quote from what Pandit Jawaharlal Nehru said about this particular problem which has dogged India throughout history more or less. He said, "But the basic fact remains that we have yet to develop a unified nation. We distrust each other. Under stress or some calamity or external danger we all unite; when that immediate urge is removed, we fall back into our respective shells, and lose the sense of the whole. Painfully, we try to get out of the shells and build the unity of India. Step by step, we have gone and then something happens, which raises our inner urges and feelings. Whether it is caste or provincialism, we still live in a tribal age. Religion was exploited to break up our country and now language which should be a binding and ennobling factor, works in the same way. Meanwhile, caste remains to separate us and encourage narrow groupings". This is a remarkable statement because this has been our experience. We go on building up unity, harmony and a tolerant system and then suddenly something happens and everything snaps and we retreat into some sort of barbarism. It is this type of retreat, that we are facing today and we have to try hard to overcome this kind of relapse into barbarism, relapse into intolerance and relapse into violence that is taking place in our country today.

We have here to look at not only our own university, our own region, our own country but beyond that. The world is becoming one, they say, and there is so much talk about globalisation of everything – politics, society, economics and commerce. Now, we have to ask ourselves if it would be possible for India to be an effective member of this global society, to get into the stream of world events, if we are quarreling with one another, in the name of religion, caste or language. We would not be acceptable to the rest of the world, if we are falling back into Hindu obscurantism, fanaticism and other abominable qualities which would not go harmoniously with the new world that is emerging with greater liberalisation, greater communication and greater efforts to understand each other. And, therefore, if you are to succeed in our social and economic development and if you are to become a member, an influential member of the new world order, and we have every right to be an influential and a leading member of the new world order, then, we have to set our house right. We have to have modern, civilized patterns of behaviour established in our own country and I feel that the young people, particularly can contribute a lot to this. We normally say that the young inherit the future. To my mind, the young in India have already inherited. Unfortunately, the elder generation, the older generation, is, I must confess, not setting a good example for the younger generation. Therefore, I should like to appeal to the youth of this University and this country that even if they have to disregard the examples set by the elders, they have to take courage into their hands and strike out their own path for a better future for our country.

We are bedeviled with social ills and we preach day in and day out about the status of women, against such ills as giving dowry. Dowry deaths, infact, even in States where there has been nothing of the sort, are cropping up now. Cannot the young people themselves put a stop to this? Cannot they disobey their parents or relatives and say that they refuse to take dowry? I don't think there is any legislative or administrative answer to the evil of the dowry system, which produces many other evils, except the young people themselves taking the decision not to accept dowry. If they do not do that, then, I think there is no use in blaming the curse of this system. To my mind, dowry is the first great act of corruption. By taking dowry, while you marry, you are really indulging in an act which is supremely corrupt and if you start a new life with this basic corruption, then, certainly society will be corrupt. Today society is corrupt and if one has to get over that, one has to deal with some of the basic, root-causes of this corruption. I think the young people can do a lot in that field.

Here, standing here, talking about some of the evils, especially communalism, I feel really happy that the state of Tamil Nadu has been happily almost immune from this evil during these mad days and I think it is important that one should recognise the achievement of Tamil Nadu, to encourage it, so that this evil does not come into this civilized society of the South. It is easy to destroy it. One or two acts of violence or intolerance are enough to destroy that. While I congratulate Tamil Nadu for avoiding this danger, avoiding this menace, I hope that people will try their best not to let it come in, even in a small measure, to poison the entire fabric and atmosphere of life here. I am sure that this University will dedicate itself not only to higher education, to scientific education, to extension work, but will try to fashion the minds of the young people in a way so that our country will be a happy, tolerant, non-violent society and not one that will be riven by violence and differences. India will not be able to survive if it is divided in this way and no part of India will be able to survive, if India is divided.

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inistry of Human Resource Development
Department of Education

PORTUGUESE GOVERNMENT SCHOLARSHIPS, 1993-94

plications are invited on the application format given below from lian nationals residing in India for the award of two nine monthly holarships for postgraduate studies, research work in Cultural and tistic fields for the academic year, 1993-94

ration : Each scholarship will be of 9 months duration starting from t November, 1993.

alifications : Scholarships are meant for the artists, research scholars experts and University professors in Cultural and Artistic fields who ow the protuguses Language. The applicants should hold postgradu- degree in the converned subject with 60 % marks or above.

ssage Cost : Passage cost from India to Portugal and back will be rne by the candidates themselves or their employers/sponsors subt to the availability of funds, the passage cost may be met by the overnment of India provided the candidate is eligible under the rules.

ST DATE : Last date of receipt of applications in this Ministry is 16th ril 1993

OCEDURE TO APPLY : The applications should be addressed to rector (Scholarships), E S. 5 Section, Department of Education Minis- of Human Resource Development A-1/W-3 Curzon Road Barracks, sturba Gandhi Marg, New Delhi-110001 on the application format ven below alongwith the following documents.

Attested photostat copies of all the certificates/degree starting from atriculation/Hr Sec. Showing date of birth and academic alifications

No objection certificate alongwith the re-employment guarantee m the employers

Document of acceptance by the teaching establishment where the ndidates propose to carry out their studies.

Two letters of recommendations.

Medical Certificate from Registered Medical practitioner (M.B.B.S.) owing physical and mental fitness of the candidate.

Evidence of knowledge of Portuguese Language.

TES

Applications received late will not be entertained.

Incomplete applications will not be entertained.

No convassing in any form wil be entertained.

Employed persons should send their applications through proper annel.

Equivalent foreign degrees will be considered.

Candidates who have already been abroad for study/training/speciaation/on a scholarship or on their own for a period exceeding six onths are eligible to apply only if they have been in India for atleast ree consecutive years after their return from abroad.

7 Applications of candidates who are abroad at present will not b considered.

8. Candidates who do not possess the requisite qualifications need no apply

9 Candidates should have sufficient knowledge of donor country i.e Portugal as well as of India.

APPLICATION FORMAT FOR PORTUGUESE GOVERNMENT SCHOLARSHIPS, 1993-94

1. Name of the candidate (In capital letters)
2 Subject for which applying
3. a) Mailing Address
   b) Permanent Address
4. Father's Address and Occupation
5 Date of birth and the state to which the candidate belongs
6. Whether a member of SC/ST If so, attach a certificate issued from the competent authority

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7. Academic record (Starting from Matriculation/Hr Secondary)

Name of the Board/ University/ Institution	Exam (s) passed	Year of passing	Division/ class with position If any	% age of marks obtained	Subjects taken

In case no Division/class is awarded and only grading is done th conversion formula adopted may be mentioned

8. Details of Professional/ Practical/ Training/ Research/ Experienc specifying the period and number of papers published, previou employment with name and date of employment only
9. Knowledge of Portuguese Language
10. Nature of present employment (as well as previous employment wit date of appointment, designation and the name and address of th employer.
11. Attach sponsorship/No Objection Certificate from the presen employer.
12. Have you been abroad ? If so, give full particulars of the country an the period Also mention the year of return to India.
13. Proposed programme of study/research/training specifying
    i) the work at present engaged in
    ii) future plans/prospects after the proposed studies/research
    iii) nature and programme of study/research desired
    iv) how are these related to the socio cultural and Artistic developmen of India ?

14. Any other information

Place : ——————
Date : ——————

(Full signature of candidat

davp 93/76

Indian History Congress

"After toiling for nearly half-a-century under the inspiring guidance of our great leaders to transform ourselves into a secular, democratic and egalitarian society, we all of a sudden find ourselves in a situation which is marred with a steep erosion of our cherished values. Disturbing and dangerous trends like mixing religion with politics, defiance of rule of law, subversion of constitutional proprieties, indoctrination of youth with bigotism are, day by day, assuming alarming proportions threatening the very fabric of our nation", said Mr K. Vijayabhaskara Reddy, Chief Minister of Andhra Pradesh, while delivering the inaugural address at the 53rd Indian History Congress hosted by the Kakatiya University at Warangal recently.

Stressing the need for a dispassionate, disinterested and scientific treatment of all events while writing, interpreting and teaching history, Mr. Vijayabhaskara Reddy said that all those engaged in the exercise of distorting the historical facts in the name of reinterpreting the country's history were ignorant of the fact that 'history cannot be changed' and that we have to learn right lessons from it. He deplored the tendency of misleading the youth and motivating them to wreak vengeance on the present generation for the mistakes alleged to have been committed by our forefathers centuries ago.

The Chief Minister observed that the conference was being held at a time when the country had reached the cross-roads of its history and called upon the Indian History Congress to give a lead to the nation in presenting the facts of history to the present as well as the coming generation in an objective manner.

Mr. M. Narashimha Reddy, Minister for Municipal Administration & Urban Development of Andhra Pradesh, who released the souvenir *'Kakatiya Smarika'* brought out on the occasion, emphasised the need for a harmonious blend of all that was valuable in history. A proper understanding of history enabled one to avoid the mistakes and pitfalls that brought suffering in the past, the Minister said.

Prof. B.N.S. Yadava of University of Allahabad and incoming President of the Congress in his presidential address said that the expectations from this organisation had considerably increased as the people seemed to have become more historically minded.

Prof. K.M. Shrimali of Delhi University and General Secretary of the History Congress read out the messages sent by the Vice-President and the Prime Minister of India.

Welcoming the delegates Dr. K. Jayashankar, Vice-Chancellor of the Kakatiya University felt that the city of Warangal – a place known for its hoary past, a restive present and perhaps a hazy future – presented a unique setting for the Indian History Congress.

About 800 delegates representing universities and research organisations all over the country attended the three-day session. Prominent among those who attended and presented the papers included Prof. Irfan Habib, Chairman of Indian Council for Historical Research (ICHR), Prof. R.S. Sharma of Patna University, Dr. Shereen Ratnagar of Jawaharlal Nehru University, Prof. Aniruddha Ray of University of Calcutta, Dr J.V. Naik of University of Bombay, Prof. M.L. Krishna Murthy of University of Hyderabad and Prof. B.R. Grover, former Director of the Indian Council for Historical Research (ICHR).

Bangalore Varsity Convocation

Indian universities should do research for multinational corporations and global agencies in return for royalties said the Vice-chairman of the University Grants Commission (UGC) Prof S.K. Khanna while delivering the convocation address at Bangalore University He said the research done by Indian varsities should be closely linked with industry's needs. He noted that the nation's universities faced financial constraints and hence, alternative sources of funds for research would have to be tapped. Should multinational corporations pay India's higher centres of learning to do research, these companies would be able to save on time and costs, Prof. Khanna noted.

He said that perhaps, India was producing technical personnel who were not suited to national needs due to the lack of links between universities and industry. At the end of 1987, 20 percent of the 17 million educated yet unemployed people in India were graduates and postgraduates. The 8,000-odd scholars awarded doctoral degrees every year could not find suitable employment.

Technical education would have to be correlated with manpower needs, Prof. Khanna said. In future, the funding of laboratories and university departments could be linked to the ability of these set-ups to undertake research, he said.

Prof. Khanna admitted that Indian universities could not provide an environment in which science and technology could flourish. Conditions conducive to high-quality research would have to be created and the higher education system needed to be debureaucratised, he urged.

Stating that the management of the nation's high education system needed to be reappraised, Prof Khanna said the evaluation of students had to be decentralised and Indian education had to be made flexible enough to encourage students to leave formal courses and rejoin such programmes later.

Bangalore University's acting Vice-Chancellor, Prof. C.E.G. Justo, in his welcome address, said the varsity presently consisted of 242 colleges, which had enrolled a total of nearly two lakh students. However, the university's teaching and non-teaching staff were inadequate and had to be provided promotional opportunities. The university also proposed to start sub-centres in Kolar and Tumkur.

Bangalore University depended on block and development grants received from the State Government. Prof. Justo stated that the fixation of block grants was unscientific. Though the university had asked for Rs 1,643 lakh to meet non-plan expenditure, it had been granted only Rs 889 lakh. The varsity had been given only Rs 40 lakh to meet plan expenditure, though it had asked for Rs 190 lakh. Special grants from the State Government or contributions from colleges would be needed to meet the growing expenditure on examinations, Prof. Justo said.

He said the varsity had received Rs 200 lakh from the UGC and other sources for 1992-93. About 40 research projects, involving an expenditure of about Rs. 150 lakh, were under progress. The varsity was doing research jointly with American universities under the UGC's auspices.

Prof. Justo said new courses, such as those leading to the Master of Tourism Administration, Master of Engineering in Power Electronics and Digital Communication and Bachelor of Nature Cure and Yogic Science Degrees, had been started.

Altogher, 13,756 degrees in 60 categories were awarded by Karnataka State Governor Khurshid Alam Khan, who is also the varsity's Chancellor.

Phone for Deaf & Dumb

A team of graduates from the Anna University's College of Engineering, Guindy has developed a telephone which could help deaf and dumb people talk to each other by displaying their conversation on an LED (light-emitting diode) screen.

The work of the trio and their guide has won this year's National Technology award for the 'Best Technological Innovation' for the welfare of the handicapped.

Basically, the "telephone for the aurally handicapped" developed by Messrs. K. Nalinimohan, V.S. Kannabran, Abdul Razak Khaleel ur Rahman, Electronics and Communication engineering graduates, is a receiver attached to a conventional telephone. It uses a push button telephone with dual tone multi frequency (DTMF) dialling, and has a set code for the alphabets. To register 'A,B,C' on the LED screen, the handicapped user presses "21,22,23." Similar codes are available for all alphabets and the characters can be viewed by both the caller and the called party. A ready reckoner is provided for the user to become familiar with the codes, according to the project guide, Dr. N. Gunasekaran of the School of Electronics and Communication Engineering.

The battery-powered receiver, linked to the telephone displays the words in a sequence. A scrolling facility is available and storage of the messages in memory is possible for future playback.

Teletypewriters which use telephone lines are available for the deaf but only specialised institutions can afford them as the cost is high. But the award winning alphanumeric telephone receiver is priced at about Rs. 1,500. Such products could make it to the marketplace if industry shows greater interest, according to the Director, Dr. T. R. Jagadeesan.

Students of the College of Engineering have won the national technology awards for three years in succession.

MGR Varsity Adopts Three-year PG Course

As per decision of the Supreme Court the duration of the post-graduate degree courses in Dr. MGR Medical University has been increased from the present two years to three years with effect from the coming academic year. This was revealed by Dr B.P. Rajan, Vice-Chancellor in Tiruchi recently. The weightage of one year given to the service candidates undergoing P.G. degree courses and diploma courses would also be withdrawn on the suggestion of the Supreme Court, he added.

Latest Medical Information

The earth satellite station of the MGR Medical university library set up at a cost of Rs. 15 lakhs is reported to have been linked to the Information Centre at Delhi, and through it to the Washington International Information Centre, so that up-to-date information in various fields of research reached the students. The students of the Thanjavur Medical College had been getting information through the centre from Delhi and abroad. The university had decided to establish an information centre, at the Madras Medical College connecting it with the satellite centre for the convenience of the research students. The link would be established by the end of the month.

Symposium on Materials for Development

'Inter-disciplinary research in universities and institutions of higher learning is the need of the hour in order to make the research findings more useful to the developmental needs of the country; yet we have not been able to make a significant dent in this regard,' said Dr. K. Jayashankar, Vice-Chancellor of Kakatiya University. He was inaugurating the two-day national symposium on 'Materials for Development' held under the auspices of Andhra Pradesh Akademi of Sciences and Kakatiya University at Warangal recently.

Dr. Jayashankar said that while the levels of development depended upon the development of science and technology and vice versa, the process of development had socio-economic and political dimensions as well with quite a few policy implications.

He further said that the role of material scientists in the developmental process was to identify and innovate the materials needed for sustenance and acceleration of economic development while that of social scientists and policy-makers was to ensure distributive justice of the fruits of development. He therefore emphasized the need to have integrated and comprehensive strategies for development which were possible only if we shed our inhibitions regarding the interdisciplinary approach to various issues concerning the well being of the nation.

Padmabhushan Dr P. Siva Reddy, President of the A.P. Akademi of Sciences, who presided, said that extensive research work was being carried on the development of materials for solar cells and new types of semiconductors. He said a stage had been reached when a scientist, an engineer or a metallurgist was in a position to generate tailor-made materials to suit different applications. Material science had become an interdisciplinary area involving physicists, chemists, metallurgists, bioscientists and engineers, Dr. Reddy added.

Prof. G. Sivarama Sastry, Honorary Secretary of the Akademi released the volume containing the abstracts of papers presented at the symposium. Prof. Sastry said that significant progress had been made in the development of materials but the lacuna was that the materials developed in the laboratories were not being fully utilised at the technological level.

Prof. Dinker Sirdeshmukh, President of the Regional Centre of the Akademi said that fourteen experts were presenting state-of-art surveys on a wide range of materials from metals and alloys to biomaterials. The deliberations at the symposium would open new pathways for the younger participants, he hoped.

Prof. P. Jayarama Reddy, Vice-Chancellor of Sri Venkateswara University, delivered the keynote address on 'Materials for Solar Energy Devices'. It was a lecture-cum-slide show.

IIM Convocation

Dr. Abid Hussain, Vice Chairman, Rajiv Gandhi Institute for Contemporary Studies, was the chief guest at the seventh convocation of Indian Institute of Management, Lucknow. He advised the graduands to dedicate themselves to the cause of improving management practices in India.

Dr. Abid Hussain said that India was now entering a challenging, exacting and difficult era where strengths of the new generation will be tested in the marketplace and not in the bhavans of the secretariats.

He reminded the students that India had made major achievements since Independence, but, the pace of growth compared to some other countries was slow. With the end of the cold war it may appear that Capitalism had won. But what the students must realise is that there was no single model to follow. There were three different capitalist models, namely, German, Japanese & American. One had to examine various aspects of these systems and select the one best suited for the development of India. In India, defensive strategy and protectionism will not work as it was no longer possible in this boundaryless world to enforce these. He forecast that the protectionist measures being undertaken by the Clinton Administration in USA will not be successful.

Sovereignty of nations in the traditional sense was no longer possible. Interference in national affairs was likely to increase as seen from current trade wars and trends towards globalisation. The nature of industry and corporation itself will change, he said. It was no longer possible to talk of a business organisation in the context of a single country as the identity may be transnational in character.

He emphasised that it was neither German, nor US model that we must follow, but Japanese model may be the most appropriate for us. Concept of state intervention will also have to change somewhat on the lines similar to MITI in Japan.

He claimed that he had yet to come across a talent better than what we had available in India. Referring to the fact that future wars were going to be fought in the marketplace, he warned that we could not afford lack of cohesion between labour and management. He advised the students to understand the importance of innovations and inventions at the operating level which was the only way to achieve continuous competitiveness in the global context.

Shri Hari Shanker Singhania, Chairman, Board of Governors, in his address expressed his appreciation for Dr. Abid Hussain for his economic vision and foresight and urged the graduating students to properly use their knowledge and mental power in right direction for progress. He also cautioned that economic development should not be allowed to be hampered because of proliferation of non-conventional weapons, drug cartels and ethinic unrest.

He advised the students that they should decide for the future strategies on the basis of past experience. Since we had added new problems due to unplanned development, the developing countries were facing the havoc of undoings of developed ones, he said. He also expressed his concern for ecological imbalance and destruction of natural resources.

In his welcome address Director, Prof. J.S. Rao thanked the faculty, students and the staff for the support and cooperation. He apprised the audience about the progress made by the institute in various areas of its activities.

At the convocation three students were awarded medals for their meritorious academic performance. Postgraduate Diploma in Management was also awarded to students.

Indian Institute of Management, Lucknow is one of the four national level Institutes of Management established by the Government of India for improving management practices in the Indian industry and non-corporate sector. The Institute has been conducting its 'Two year' Postgraduate Program in Management. This program is recognised as an important course in management education and has been well received by the Industry. In addition to Postgraduate Program, the Institute organises Management Development Programs for the working managers at Lucknow and at other major cities such as Bombay, Delhi and Madras and also undertakes research and consultancy in the area of Management.

Mission of the ICEA

The International Community Education Association (ICEA) is an international non-governmental organisation having a consultative status with UNESCO. The mission of ICEA is to promote and develop the concept of community education throughout the world through dissemination of information about community education, through co-operation with government and non-government groups who are also interested in education of the community, through the development of an international network of active community educators and through the development and implementation of programmes and activities that will help local communities and movements to initiate and achieve the goals they have established.

Community development programmes that relate to the educational aspirations of the community have been termed "community education". Community education includes the educational aspirations of all members of the community, from the very young to the elderly, and of groups within the community that might have special needs or interests. It aims to promote the development of the community as a whole through individual and group activity.

Community education is the process whereby communities, both local geographical communities and communities of mutual interest, can be created, developed or sustained. Community education concerns the meaningful participation of members of the community in the identification of their learning needs, wants and problems, and in the planning and implementation of services, programmes and facilities that relate to them. The ultimate aim of community education is to develop a self-reliant, learning society.

The ICEA believes that :

– Education should support the task of making people – children, youth, adults – aware of their identity and of their problems, needs and aspirations.

– Education should help people to develop the knowledge, skills and resources that exist in their communities and to use them to tackle their problems.

– Education should encourage people in their communities – local, national, regional, global – collectively to reconstitute their environment and make it more responsive to their needs and aspirations.

– People should join together in groups and organisations in order to take control of their lives and the future of their communities.

The ICEA exists to :

– Take a lead in spreading the message of community education worldwide through publications, conferences, programmes and projects.

- Develop a world-wide network of members who are actively involved in furthering community education in their own countries.

- Address community needs – local, national, regional, global – of special concern to its members.

- Initiate and support community education programmes and projects, particularly those for the disadvantaged.

- Establish partnerships with other organisations whose aims are conducive to the achievement of ICEA's mission.

- Provide a forum for the exchange of community education ideas and practices.

Those interested to partake in the activities of ICEA, may please get in touch with Prof. Ramlal Parikh, Regional Director, Asian Regional Directorate, C/o Gujarat Vidyapith, Ashram Road, Ahmedabad - 380 014.

Higher Education in Assam

The Assam College Principals' Council (ACPC) recently organised a seminar on "Problems of higher education in Assam". Inaugurating the seminar Sri H.K. Gayan, Director of Higher Education, Assam referred to the various steps initiated by the state govt. for creating a healthy academic atmosphere in the state and asked for the cooperation of all Principals. He assured the Principals that all possible steps would be taken to remove the grievances of the aided colleges of Assam.

Dr B.C. Lahkar, Principal, Gauhati Commerce College, who presided, in his address discussed various aspects of higher education in Assam and pointed out the need for amendment of Assam Aided College Management Rules. Referring to the precarious conditions being faced by the Principals of aided colleges, Dr. Lahkar said that the Principal of a college should have a say in giving selection grade scale to the lecturers.

Presenting a paper on the subject, Sri Pradip Saikia, President of ACPC stressed the need for diversification of courses in Higher Secondary level and appointment of more Lecturers in the colleges for the plus two classes. Sri Saikia referred to the practical difficulties of the colleges and said that the tuition fees in the colleges had remained unchanged since 1950. He pointed out the double standard in higher education saying that against the excellence in scientific and technical education, things were not at all satisfactory in the field of general education.

Dr. Prabin Chandra Sarma, Secretary of the ACPC and Principal of Pandu College presented another paper on the topic. He pointed out the lopsided growth of higher education with more than proportionate expansion of general education. Referring to the need for more teachers in the colleges, he pointed out that the teacher students ratio in Assam was 1:200 against the national ratio of 1:40. He said that in the interest of higher education the higher secondary section should be removed from the colleges.

Moral Education to be Compulsory,

The Haryana Chief Minister, Mr. Bhajan Lal, announced that moral education would be made a compulsory subject in educational institutions from the next academic year, so as to infuse among the people a sense of moral values. "Had moral education been promoted in the country, we would not have faced such a situation in Punjab today," Mr Bhajan Lal said on the occasion of the prize distribution function of Chhaju Ram memorial college in Hisar.

The Chief Minister also said that the network of technical institutions would be expanded in the State and such institutes would be set up at district headquarters, block headquarters and in big cities.

While expressing his serious concern over the growing menace of copying in exams, he said though the government had taken necessary steps to check copying, it still needed the active co-operation of the teachers as well as the students.

Ambedkar Open Varsity Convocation

The Union Minister for Human Resource Development, Mr Arjun Singh, complimented the Andhra Pradesh government for initiating the concept of distant education by starting the first ever open university in the country. He was speaking at the sixth convocation of Dr B.R. Ambedkar Open University in Hyderabad recently. Mr Arjun Singh said that though the country could achieve excellency in several fields still the poverty and illiteracy continued to exist due to negligence in listing country's priorities.

He called upon the youth to work with commitment and conviction to strengthen the country both economically and socio-politically. He said that this had become imperative as some vested interests were trying to whip up communal passions to create unrest in the country.

He said that Dr Ambedkar had always reminded the people of the imperative need to 'idealise the actual but not to actualise the ideal.' "It is intimately related to the concept of eduction and an innovative idea of immediate relevance to our country and an idea which is capable of brightening and enriching the lives of millions of our people," he observed.

According to him, the independent India witnessed a marked shift in priorities in the sphere of higher education and the emphasis had been on making education socially relevant and accessible to all. He said "without stress on universalisation of elementary education, the demand for acquisition of higher levels of knowledge can only increase."

He said the short-term courses, designed in modular form like marketing management, women and health environment and consumer education by the open university, would go a long way and were truly poised for a take off.

The Vice-Chancellor, Prof. S. Basheeruddin, in his report, said the university had made a modest beginning towards interactive counselling system by sending expert teams from the headquarters to various study centres. This would enable the study centres to benefit by expert guidance and the 3,000 or so part-time academic counsellors to have face-to-face interaction with the experts deputed from the headquarters.

"We have also started conducting training sessions for academic counsellors and plan to hold regional workshops so that by the end of this year all the counsellors would have been trained." Prof. Basheeruddin added.

He said that as many as 3,430 students were conferred degrees and diplomas, including two students, who while serving a prison sentence, enrolled themselves as students.

The Chancellor and Governor, Mr Krishan Kant, gave away eight gold mendals (six of them to women) and degree and M. Phil certificates.

Orientation Course at Gorakhpur University

The XI Orientation Course for college and university teachers recently concluded at the Academic Staff College, Gorakhpur University, Gorakhpur. Prof. V.S. Pathak, Vice-Chancellor, Gorakhpur University was the chief guest at the valedictory function.

The course covered four components, viz. (a) Awareners of linkages between society, environment, Development and Education; (b) Philosophy of Education, Indian Education, Indian Education system and pedagogy; (c) Subject Upgradation; and (d) Management and Personality Development. The course was marked by lectures, discussion, written work and seminar.

Delivering his valedictory address Prof. V.S. Pathak, said that a real teacher was to be engaged in a life-long pursuit of knowledge. In the education system the teacher played a pivotal role. He moulded the lives of the students. Education was a bipolar process involving the educator and the learner. Quoting profusely from the Taitiriya Upanishad, Dr. Pathak remarked that a good teacher established an intellectual and emotional relationship with his students through communication. A competent teacher had a profound knowledge of his subject. He enriched knowledge and understanding of his students. But the present situation in the country was not congenial to the development of the personality of students along sound lines. Prof. Pathak deplored that educational institutions in the country resembled factories with no atmosphere of meaningful dialogue between teachers and students. He pleaded for value-based education in India for all round development of society.

Prof. P.S. Pandey, Director, Academic Staff College, observed that the University Grants Commission had introduced Orientation Courses to acquaint young college and university teachers with the larger context of education and the role of the teacher in the society. These courses also allowed young teachers to gain specialised knowledge of their respective disciplines. The course provided for personality development of the participants, he added.

Sixteen teachers from the disciplines of English, Hindi, Sanskrit, Zoology, Economics, Defence Studies, Medieval History, Ancient History and Archaeology, Commerce, Sociology and Psychology attended the Course.

News from Agricultural Universities

Plant Physiologists Meet

A four day national conference on "Advances in Molecular and Plant Physiological researches in crop improvement" was jointly organised by Narendradev University of Agriculture and Technology and Indian Society of Plant Physiology at Faizabad recently. The conference was inaugurated by the adviser to the U.P. Governor, Mr Moosa Raza while

Vice-Chancellor Dr S.S. Khanna presided.

According to Dr. B.B. Singh, Head of the Department of Plant Physiology, the conference recommended that Indian Society of Plant Physiology initiate programmes to popularise science in rural areas and special emphasis be laid in the development of scientific studies in backward areas.

He said that the society would provide small grants to purchase equipments used by the students for the practicals.

An ambitious plan was drawn up to upgrade scientific education in the schools and colleges situated in rural areas in the country.

In his keynote address, Dr. B.B. Biswas, Director, Bose Institute, Calcutta University and renowned biotechnologist emphasised the importance of introduction of foreign genes into wide variety of plants which had created revolution. Dr Biswas said that genetically engineered crop plants had now become a reality and resistance to herbicides, insects, fungi, bacteria and viruses were appearing on the scene but the progress of the work was slow due to difficulty in transformation and regeneration of most of the important crop plants including cereals and legumes. He said that new insights into plants microbe interaction were contributing results to design novel approaches for disease control.

Other distinguished scientists who presented papers included Prof D.N. Tyagi of Banaras Hindu University, Prof. Y.C. Onachal, University of Agricultural Sciences, Bangalore, Mr S.D. Mishra, head of plant physiology, Bhabha Atomic Centre, Bombay, Dr R.S. Dwivedi, Indian Institute of Sugarcane Research, Lucknow.

Dr G.S. Sirohi, ex-head, division of plant physiology, Indian Agricultural Research Institute, New Delhi chaired the scientific session. Director of Extension, Dr R.P. Singh, gave a brief account of the progress in the N.D. Agriculture University.

About 150 eminent scholars and scientists from different parts of the country presented papers at the conference.

Farmers Mela at HAU

The two-day annual Kisan Mela of Chaudhary Charan Singh Haryana Agricultural University was recently organised in which more than 30,000 farmers from Haryana and adjoining states participated. Ch. Bhajan Lal, Chief Minister of Haryana inaugurated the mela and took a round of the Agro industrial exhibition organised at the venue where more than 120 stalls were put up by the different constituent departments of the university for educating the visiting farmers in their respective work.

Addressing the mammoth rally of the farmers and the scientists, Shri Bhajan Lal said that to meet the foodgrains demand of the ever increasing population, it was essential that the farmers adopted latest technology in their agriculture, animal husbandry and home management areas. Appreciating the new and useful researches and extension work undertaken by the university, the Chief Minister advised the scientists to ensure that the relevant technology was disseminated to the deserving farmers.

In his welcome address, Dr Amrit Lal Chaudhry, Vice-Chancellor, detailed the farmers welfare measures introduced by the university. Dr. Chaudhry reiterated that the university was committed to the betterment of the farming community, unemployed youths and farming women. He said that the university scientists through its 9 Krishi Vigyan Kendras and Krishi Gyan Kendras and Research Stations had maintained a direct rapport with the farmers at grassroot level. Dr. Chaudhry requested the farmers to come to the university for the solution of their different farming problems.

The university scientists took the visiting farmers to 9 different spots of the research farm where they were shown the rabi crops of wheat, grams, barley, oilseeds, pulses, barseem and fodder crops. The new technology applied in the growing of these crops was explained to the visiting farmers through demonstrations. Improving agricultural production by introducing the new technology was the main theme of the mela this year.

On the occasion, the farmers purchased the seeds of kharif crops worth Rs. 25 lacs. At the crop competition organised at the mela venue, hundreds of farmers displayed the samples of their crops. Thousands of farmers got tested the samples of their diseased crops, soils and water. At the Buzz session, the farmers asked the solution of more than 300 problems pertaining to agriculture, livestock and animal husbandry. Agriculture literature worth several thousands was sold at the exhibition.

Prof. Chattar Pal Singh, Minister for Technical Education, Haryana, Shri M.K. Miglani, Commissioner and Secretary, Agriculture and Dr. A.S. Faroda, Director of Extension also visited the mela and addressed the farmers.

News from UGC

Countrywide Classroom Programmes

Between 8th April to 14th April, 1993 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The Programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission

1.00 p.m. to 2.00 p.m.

8.4.93

"In Search of Ethnic Dimensions: The Koyas – I"

"All My Sons – Critical Appreciation – I"

"The Language of Science"

9.4.93

No Telecast

10.4.93

"S.O.S. Waste"

"New Horizons"

"Week Ahead"

11.4.93

No Telecast

12.4.93

"Interaction Field or Force Field"

"Management Functions and Behaviour : Organization Structure"

"Global Ancillarisation is the Right Answer"

13.4.93

"The World of Complex Compounds"

"Ways of Thinking – VI Making Space"

"Hypnotherapy : Medical Uses of Hypnotism – II"

14.4.93

"The Dinosaur – I"

"The Equipment Bridges and Rafts"

"Preserving the Past – I"

Ind Transmission

4.00 p.m. to 5.00 p.m.

8.4.93

"Electronics – I, The History of Electronics"

"It Moves It's Alive"

"The Week Ahead"

9.4.93

No Telecast

10.4.93

No Telecast

11.4.93

No Telecast

12.4.93

"The Origins Of Quantum Theory From Planck To Bose – III"

"New Horizon"

13.4.93

No Telecast

14.4.93

"Mesembs – The Flowering Pebbles"

"Mapping Our Earth"

"Eyes In The Sky – Remote Sensing – I"

News from Abroad

WUS Bureau Meet

Prof. Gurdip Singh Randhawa, Vice-Chancellor, Guru Nanak Dev University, who is also the Vice-President of International Executive and President of Indian National Committee of the World University Service, said that the World University Service at its recent International Bureau meet held at Geneva (Switzerland) took stock of scholarship programme in Asia, Africa and Latin America. It also reviewed the community development programme, particularly in Third World countries.

Prof. Randhawa, who presided, said that apart from considering various appointments in the International Secretariat and in the regions, the International Bureau also thoroughly discussed the planning for the regional workshops in Asian and African regions.

World University Service is an International organization with its headquarters at Geneva. It mobilises the faculty and students at the universities to reach out to the community and identify and execute projects aiming at helping the weaker sections of society, particularly women, displaced students and underdeveloped institutions. Thus, apart from working within the university sphere, it takes up a variety of projects like building up healh centres, promoting women programmes, helping child-care and putting up working women hostels, creches etc.

Internationalising Higher Education

The Fourth Conference on Internationalising Higher Education Partnerships with Business & Industry will be held on July 6-8, 1993 at Pembroke College, Cambrige, England. The theme of the conference is "Partnerships for Sustainable Growth and Development". The conference will focus on (1) The increasing interdependence of higher education around the world, and the need therefore for international programmes and institutional partnerships; and (2) The changing relationship between education and the world of work, with increasing links between academe and industry reflected by revisions in the educational curriculum..

The conference has been designed (i) to bring together educators and business representatives; (ii) to operate as far as possible in an interactive workshop mode; and (iii) to involve each participant in membership of an ongoing special interest discussion group on an issue of their own choice.

Further information may be had from Dr. Chris de Winter Hebron, Academic & Training Director, H + E Associates Ltd., 12a, Church Street, Stiffkey, Nearwells, next-the-sea, Norfolk NR23 1QJ, England.

Studying at Murdoch University

Murdoch University, in Perth, Western Australia, was established as a Government-funded university in 1973, and has earned an outstanding reputation for excellence in research and teaching. The University has one of the most highly qualified faculty bodies in Australia and is committed to interdisciplinary study. Students are encouraged to select courses to match their individual needs. In keeping with this approach, the University offers a unique academic environment which is presonalised and caring.

Total students population is approximately 8500 of whom 840 are international students from over 50 different countries including a small number from India. The International Office provides a wide range of student support services such as airport reception, a week long orientation, on-going welfare support and social activities. Housing is available on-campus for 400 students in self-catering flats and a Housing Officer helps locate students in off-campus accommodation.

The University's eight Schools of Study offer over 80 undergraduate and postgraduate programmes leading to the award of Bachelor, Diploma, Master and Ph.D. qualifications in the following fields of study: Arts, Biotechnology, Commerce, Economics, Education, Environmental Science, Law, Science, Social Science and Veterinary Science.

The University welcomes applications from well-qualified students who will normally be expected to have already undertaken some University studies in India. For postgraduate study, a Master's degree is the normal requirement for admission. No University scholarships are available for undergraduate study and very few for postgraduate study.

For further information please see the advertisement elsewhere in this issue or write to the International office, Murdoch University, South St, Murdoch, Western Australia 6150, Tel: 61-9-3602756, Fax: 61-9-3105090

M.Sc. in Environmental Diagnostics

The Cranfield Biotechnology Centre at the Cranfield Institute of Technology proposes to introduce a new M.Sc course in Environmental Diagnostics in October 1993, which will cover the entire breadth of environmental concerns that affect both the public and private sector.

The course has been designed to prepare graduates to fill the increase in demand for environmental protection officers and advisers within industry, education and public health. Participants will not just learn about the current methods for detecting and monitoring pollution but, more importantly, how to control and rectify the contamination.

The course is available as either a twelve month full-time or a part-time programme. It is open to graduates with a good honours degree or equivalent in a scientific or engineering discipline.

Further information can be obtained from Mr Frank Taylor, Cranfield Biotechnology Centre, Cranfield Institute of Technology, Cranfield, Bedford MK43 0AL, UK.

UNIVERSITY OF POONA
Department of Physics
Appointment of JRF

Applications are invited for the post of Junior Research Fellowship (JRF) of Rs. 1800/- p.m. to work under Department of Atomic Energy sponsored research project (Duration three years) entitled "Development of Scanning Tunneling Microscope for Surface Studies".

Interested candidates having first class/higher second class M.Sc. (Physics, Electronics or Electronic Science) should apply to Dr. C.V. Dharmadhikari, Dept. of Physics, University of Poona, Pune - 7 on or before April 15, 1993.

Advt. No. : 14
Date : 29/3/1993

Dr. M. D. Nalawade
Registrar

CALENDAR OF EVENTS

Proposed Date of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/ Officer to be contacted
May 25-27, 1993	Sixth Annual Conference of the All India Association for Educational Research	Theme Research in Educational Management	All India Association for Educational Research in collaboration with St. Ann's College of Education, Mangalore	Dr (Sister) Lydia Fernandes A.C., Principal, St. Ann's College of Education, Managalore
Ist Week of June, 1993	Annual Conférence of Indian Academy for Instructional Planning	Theme : Instructional Planning – an educational rethinking	Pravara Rural College of Education, Pravaranagar, Dist Ahmednagar	Dr P.L. Kirkire Secretary, IAIP, BEd College Loni (Pravaranagar) Dist Ahmednagar-413712
December 14-16, 1993	1993 Annual Conference of the Society for Research into Higher Education	Theme: Governments and the Higher Education Curriculum. Evolving Partnerships	Society for Research into Higher Education, London	Prof Tony Becher, EDB, University of Sussex, Falmer, Brighton BN 1 9RG

INSTITUTE OF PHYSICS

(An autonomous research institute under the Department of Atomic Energy, Government of India)

P.O. Sainik School, BHUBANESWAR-751005, ORISSA.

PREDOCTORAL (POST-M.SC.) COURSE IN ADVANCED PHYSICS

Applications are invited for the one year Predoctoral (post- M Sc) Course in advanced physics sponsored by the Institute of Physics, which is to commence from August 1, 1993. The prime objective of this programme is to train scholars in the methodology of theoretical and experimental research in physics. Selection for the academic year 1993-94 will be made on the basis of the candidate's academic record upto M.Sc and their performance in written and oral tests to be held in Bhubaneswar in the first week of July, 1993. The basic requirements for admission are exceptional talent and motivation for research. Candidates who are keen to pursue a research career and who have an outstanding academic record need only apply Candidates should have completed Master's Degree in physics before joining this programme (but students who have appeared for the final M.Sc. examination may also apply) Those selected candidates will receive a fixed fellowship of Rs. 2500/- per month. Scholars who successfully complete the Predoctoral Course may be considered for enrolment as Doctoral Research Scholars under faculty members of the Institute subject to availability of doctoral positions, leading to Ph.D. in physics to be awarded by Utkal University and they will be paid monthly fellowship ranging from Rs. 2500/- to Rs. 2800/- with annual book grant etc. which is renewable annually upto 5 years subject to satisfactory performance.

The prescribed application form and prospectus containing more details about fields of study etc. can be obtained from the Administrative Officer (Academic), Institute of Physics, Bhubaneswar-751005 Completed form should reach the AO (A) by 1st June, 1993. Candidates called for interview will be paid single round trip second class train fare through shortest route.

DIRECTOR

THESES OF THE MONTH

A list of Doctoral Theses accepted by Indian Universities

BIOLOGICAL SCIENCES

Anthropology

1. Chaudhuri, Lipi. **Biogenetic study of mating patterns in contemporary Bengalee speaking society.** Calcutta.

2. Inakhunbi Devi, Pukhrambam **A study on the growth pattern of the Meitei and the Kabui Naga boys of Manipur.** Manipur Dr K Saratchandra Singh, Department of Anthropology, Manipur University, Imphal.

3. Jana, Asok Kumar. **Ethnohistory of the Koras of West Bengal.** Calcutta.

4 Jaswinder Singh. **Determination of age from physiological maturity with special reference to age based competitions in sports boys.** Punjabi. Prof L S Sidhu, Department of Human Biology, Punjabi University, Patiala and Dr S P Singh, Lecturer, Department of Human Biology, Punjabi University, Patiala

5 Singh, Soibam Jibonkumar **Anthropogenetical variations on the Meities of Manipur and Assam.** Manipur Dr K Saratchandra Singh, Department of Anthropology, Manipur University, Imphal

Environmental Sciences

1 Ramesh, Geetha. **Biomagnification of cadmium in a wastewater ecosystem.** Anna.

2. Ramesh Babu, Batchu. **Hyaluronic acid associated tyrosine kinase activity and its possible role in the signal transduction of transformed cells.** JNU Dr (Mrs) K Datta, Assoc Prof. School of Environmental Sciences, Jawaharlal Nehru University, New Delhi

3 Sathyanathan, B. **Heavy metal toxicity studies on the estuarine clam, Villorita cyprinoides Hanley.** CUST Dr A Mohandas, Head, School of Environmental Studies, Cochin University of Science and Technology, Kochi.

4 Singh, Mridula. **Studies on biological treatment of industrial waste water.** Durgawati. Dr S K Hasija, Prof and Head, Department of Biosciences, Rani Durgawati Vishwavidyalaya, Jabalpur

Marine Sciences

1 Jadhav, Bhaskar Laxman. **Studies on the effects of steroid hormones on the growth and biochemical composition of the mullet, Liza parsia Hamilton.** CUST. Dr R Paul Raj, Scientist, Central Marine Fisheries Research Institute, Kochi.

2 Lekha, P V. **An agroclimatic assessment of the crop growth potential of South India.** CUST. Dr H S Ram Mohan. Reader. School of Marine Sciences, Cochin University of Science and Technology, Kochi.

3. Nimbalkar, Vijay Dattajirao. **Biostatistical evaluation and management of sciaenid fishery with particular reference to Otolithes ruber (Schneider, 1801) and Johnieops sina (Cuvier 1830) of Konkan Coast.** CUST. Dr K Alagaraja, Scientist, Central Marine Fisheries Research Institute, Cochin.

4. Padmalal, D. **Mineralogy and geochemistry of the sediments of Muvattypuzha river and Central Vembanad Estuary, Kerala, India.** CUST. Dr P Seralathan, Lecturer, School of Marine Sciences, Cochin University of Science and Technology, Kochi

5 Patnaik, Dilip Kumar. **Geochemical characteristics of bottom sediments of Chilka Lake.** Berhampur Dr P M Misra, Prof, Department of Marine Sciences, Berhampur University, Berhampur

6 Tamilselvan, C **Behaviour of the herbicide 'Anilofos' in rice ecosystem.** Madras

7 Valsaraj, C P **Hydrobiological studies in the coastal waters off Bay of Bengal with special reference to marine phytoplankton.** Madras.

Biology

1 Amaresh Chandra. **Cloning and characterization of calmodulin gene from Arabidopsis thaliana.** JNU. Prof K C Upadhyaya, Assoc Prof, School of Life Sciences, Jawaharlal Nehru University, New Delhi

2. Mohan Ram, Y. **Genetic and cytogenetic effects of microwave radiation.** Osmania

3 Salimuddin **Expression of phenylalanine ammonia lyase (PAL) gene: Generation of the constructs with 5' upstream region.** JNU Prof K C Upadhyaya, School of Life Sciences, Jawaharlal Nehru University, New Delhi

Biochemistry

1. Basu, Debabrata. **Synthesis of Ti and Ri plasmid derived vector for transfer of foreign genes to plants.** Calcutta

2. Chakraborti, Krishna **Studies on hormone profile after parturition.** Calcutta

3 Chhabra, Rashmi **Role of erythroid and non erythroid forms of L-alanine: 4,5 dioxovalerate transaminase in heme biosynthesis.** JNU Dr Sudha Mahajan, Assoc Prof, School of Life Sciences, Jawaharlal Nehru University, New Delhi and Dr Kasturi Datta, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi

4 Ghosh, Samir Kumar **Studies on psychoactive drugs- macromolecule (protein) interaction.** Calcutta.

5. Gupta, Poonam **Plasma membrane ATPase and amino acid transport of Candida albicans, a pathogenic yeast.** JNU. Prof Rajendra Prasad. School of Life Sciences, Jawaharlal Nehru University, New Delhi

6. Hasan, Seema. **Isolation and characterization of lectin from Cajanus cajan.** AMU Prof Salahuddin, Head, Department of Biochemistry, Aligarh Muslim University, Aligarh.

7 Jayanthi, L D. **Acetylcholinesterase: Studies on acetylcholinesterase from monkey diaphragm and basal ganglia and from human amniotic fluid.** Madras

8 Jyothi, G. **Kinetics of the gramicidin channel: Incorporation and exchange rates.** Hyderabad. Dr C K Mitra, Reader, School of Life Sciences, University of Hyderabad, Hyderabad.

9. Kumar, K. Plasma lipid alterations and related biochemical studies in mammary gland tumour. Madras.

10. Mukhopadhyay, Gargi. Biochemical studies on the effect of retinoic acid on human platelet metabolism and function. Calcutta.

11. Naheed Qaisar. Studies of herbicides and its performance on biochemical composition of mustard and potato in a mixed cultivation. Narendra Deva. Dr A B Abidi, Head, Department of Biochemistry, Narendra Deva University of Agriculture and Technology, Faizabad.

12. Nirmala, S. Studies on antioxidant enzyme activities and related changes in pre-eclamptic toxemia. Madras.

13. Prakasa Babu, Phanithi. Membrane protein in modifications by alcohol in neurons and astroglia from rat brain. Hyderabad. Dr Mohan C Vemuri, Lecturer, School of Life Sciences, University of Hyderabad, Hyderabad.

14 Ravichandran, L V Biochemical studies on the connective tissue metabolism and the role of lysosomal enzymes in isoproterenol induced myocardial infarction. Madras.

15. Saberwal, Gayatri Studies on peptide toxins: Synthesis, conformational analysis and membrane interactions. JNU. Dr R Nagaraj.

16. Sathiyaraj, D. Studies on lipid peroxidation and erythrocyte membrane composition in myocardial infarction in type II diabetes and in non-diabetics. Madras

17. Sengupta, Tapas Kumar Cell surface of Vibrio cholerae: Interaction with betalactam antibiotics and related studies. Calcutta.

18. Sharma, Neeru Biochemical and immunological studies in Plasmodium berghei infected mice. AMU Prof Sohail Ahmad

19. Subba Rao, Y. Biochemical studies in mentally retarded children. Osmania.

20. Venkata Subba Rao, Koili Purification characterization and regulation of amylases of maize, Zea mays L seedlings. Hyderabad Prof R P Sharma, School of Life Sciences, University of Hyderabad, Hyderabad.

21. Yadav, Sushma Mechanism of protein folding: Effect of various denaturants on the structure of myoglobin. Jamia Dr Farzan Ahmad, Department of Chemistry, Jamia Millia Islamia New Delhi.

Microbiology

1 Anand, C S. Effect of fungicides on the growth and symbiotic properties of fast growing rhizobial species. Osmania

2. Mahajan, Bhuvneshwari. Studies on the immunogenicity safety and genetic markers of polio type 3 seed virus derived from the RNA plaque purified RSO + 1 seed virus. IIP

3. Tamang, Jyoti Prakash Studies on the microflora of some traditional fermented foods of Darjeeling Hills and Sikkim. NBU

Botany

1. Ajay Shankar Studies of vesicular-arbuscular mycorrhizal (VAM) fungi from the desert flora of Western India. Kurukshetra

2. Barna, Kuldeep Singh. In vitro studies of an important crop plant, Cicer arietinum L. Jammu. Dr A K Wakhlu, Reader, Department of Botany, University of Jammu, Jammu.

3. Barua, Iswar Chandra. Systematic studies of the angiosperms of Kamrup District, Assam. Gauhati. Dr S Chowdhury, Prof, Department of Botany, Gauhati University, Guwahati and Dr S K Kataki, Scientist 'SD', Botanical Survey of India, Eastern Circle, Shillong.

4. Basu, Rina. Physiological responses of crop plants due to environmental stresses. Calcutta.

5. Chankija, Sapu. Ethno-botanical study of Mokokchung and Tuensang Districts of Nagaland. NEHU. Dr Yogendra Kumar, Department of Botany, North-Eastern Hill University, Shillong.

6. Chattopadhyay, Maitreyi. Studies on some aspects of mycelial growth of Tricholoma spp in liquid culture. Calcutta

7. Chaturvedi, Neena. Eco-physiological studies of Lagerstroemia parviflora Roxb. Bundelkhand. Dr J P Tripathi, Bipin Bihari College, Jhansi.

8. Chauhan, Anil Kumar. Impact of distillery effluents on the river Wainganga at Seoni, M P. H S Gour. Dr K S Unni, Department of Botany, Govt P G College, Chhindwara

9 Chhetri, Ran Bahadur. Study on broad leaved fodder flora of Meghalaya. Gauhati Dr C L Boissya, Prof, Department of Botany, Gauhati University, Guwahati and Dr S K Kataki, Scientist 'SD', Botanical Survey of India, Eastern Circle, Shillong.

10 Dash, Sudhikar Toxicological effects of MMC on a blue green alga and albino mice. Berhampur Dr A K Panigrahy, Reader, Department of Botany, Berhampur University, Berhampur.

11 Dixit, Anilsingh Jaipalsingh. Evaluation of the mutagenic potential of pesticides in monocotyledonous plants. Amravati Dr U S Chaudhari, Vidarbha Mahavidyalaya, Amravati

12 Gogoi, Sumendra Nath. An ecological study of weeds growing in the tea gardens of Dibrugarh District of Assam. Dibrugarh Dr S K Sarma, Reader, Department of Life Sciences, Dibrugarh University, Dibrugarh

13 Gunasekaran, S. Mangrove ecosystem of Muthupet, Tamil Nadu and its environmental characteristics. Madras.

14 Gupta, Archana Studies on biochemical investigation on soft rot of Zingiber officinales Rose. (ginger). Bundelkhand Dr M C Kanchan, Bipin Bihari College, Jhansi

15. Hisamuddin Histopathological studies on roots of Luffa cylindrica infected with Meloidogyne incognita. AMU. Dr Ziaddin A Siddiqui, Reader, Department of Botany, Aligarh Muslim University, Aligarh

16 Jagadeswar, P. The genus Cercospora and related genera from Hyderabad, Mahabubnagar and Medak Districts of A P. Osmania

17. Joshi, Santa Ram Ecological studies on the effect of air pollution on the leaf surface microorganisms and litter decomposition. NEHU Dr R R Mishra, Department of Botany, North Eastern Hill University, Shillong and Dr G D Sharma, Department of Botany, North-Eastern Hill University, Shillong.

18. Kundu, Pratibha. **On the pollen morphology of solanaceae with reference to taxonomy and affinity.** Calcutta.

19. Khanna, Suneet. **Studies on Phytophthora infestans. Mon de Bary with special reference to its epidemiology and biological control.** Kurukshetra.

20. Khumanthem, Umabati. **Physiological significance of potassium in the indigenous maize, Zea mays of Manipur.** Manipur. Prof L Janmejay Singh, Department of Life Sciences, Manipur University, Imphal.

21. Lorna, K R. **Studies on the thelypteroid ferns of South India.** Calicut. Dr P V Madhusoodanan, Department of Botany, University of Calicut, Calicut.

22. Md Shahid Perwez. **Studies on Erysiphe cichoracearum DC infecting Compositae.** AMU. Dr Mohd Akram, Reader, Department of Botany, Aligarh Muslim University, Aligarh.

23. Narasimhan, D. **A floristic study of the flowering plants of Chengalpattu District, Tamil Nadu.** Madras.

24. Nirmala, C B. **Studies on the physiomorphological effects of methyl isocyanate (MIC) on plants: A select study.** Madras.

25. Pandya, Ushma B. **Soil and biomass attributes of some wastelands in Bhavnagar.** Bhavnagar Dr B R Pandit, Reader, Department of Life Sciences, Bhavnagar University, Bhavnagar

26. Patnaik, Anuradha. **Differential senescence and basipetal transport of nitrogen assimilates in radish seedling.** Sambalpur Dr N K Choudhury, Reader, Post Graduate Department of Life Sciences, Sambalpur University, Jyoti Vihar, Burla.

27. Ramamoorthy, K K. **Morphological, physiological and biochemical studies on fungicide (carbendazim) resistance in** Fusarium oxysporum f sp lycopersici (Sacc) **- Snyder and Hansen.** Madras.

28. Rayjada, Shiksha. **Studies on microbial dynamism on cotton in and around the spinning mill, Jhansi.** Bundelkhand. Dr M C Kanchan, Bipin Bihari College, Jhansi

29. Sabu, T. **Morphological studies on Indian Araceae.** Calicut. Dr M Sivadasan, Department of Botany, University of Calicut, Calicut

30. Saha, Aniruddha. **Studies on the resistance of tea,** Camellia sinensis (L) D Kze **to** Bipolaris carbonum Nelson. NBU

31. Satyanarayana Murty, Doddapaneni Veera Venkata **The fungal air-spora of Srikakulam with agricultural background.** Andhra.

32. Satyanarayana Rao, S. **Assessment of certain physiological parameters governing drought resistance in traditional upland rice,** Oryza sativa L **varieties.** Osmania.

33. Shantilata Devi, Rajkumari. **Physiological and biochemical studies of** Hirneola **auriculajudae Berk during the infection with** Psidium guajava **Linn.** Manipur. Dr G A Shantibala Devi, Asstt Prof, Department of Life Sciences, Manipur University, Imphal

34. Shukla, Ravindra Kumar. **Studies on the improvement of nitrogen use efficiency in flooded rice,** Oryza sativa L. Ghasidas. Dr S J Chipre, C M D College, Bilaspur

35. Singh, Khumanthem Kheda. **Physiological and biochemical studies on the host parasite relationship between** Narenga porphyrocoma **Bor and** Ustilaqo consimilis **Sydow.** Manipur Prof L Janmejay Singh, Department of Life Sciences, Manipur University, Imphal.

36. Singh, Lal. **Studies on the mycorrhizal relationship of** Cedrus **deodara and** Trappeinda **himalayansis, a new edible mushroom from N W Himalayas.** HP.

37. Srinivas, Banreddi. **Biological control of some aquatic weeds.** Kurukshetra.

38. Tambekar, Dilip H. **The pathogenicity of dermatophytes: A** in vitro **and** in vivo **study.** H S Gour Prof S C Agrawal, Department of Botany, Dr Hari Singh Gour Vishwavidyalaya, Sagar

39. Thaker, Chhaya. **A study of fruit rot disease of** Emblica officinalis **caused by Fusarium moniliforme.** H S Gour. Prof K M Vyas, Department of Botany, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

Agriculture

1. Adarsh Bala. **Genetic divergence and gene effects for protein content and yield in chickpea,** Cicer arietinum L. PAU

2. Bhattacharyya, Bureswar **Genetical studies in hybrid generation of Indian mustard,** Brassica juncea (L) **Czern and Coss.** Calcutta.

3. Gurbhan Dass. **Fertility management and crop geometry for yield maximisation in rice-wheat cropping** system. HP Krishi. Dr H L Sharma, Assoc Prof. Department of Agronomy, Himachal Pradesh Krishi Vishwavidyalaya, Palampur

4. Harbhajan Singh. **Studies on** pre-**harvest fruit drop in kinnow mandarin.** PAU.

5. Khan, Zakaullah. **Study of predatory nematodes and their role in bio-control of plant-parasitic nematodes.** AMU Prof M Shamim Jairajpuri.

6. Krishan Dutt. **Mutagenic effect and efficiency of physical and chemical mutagens on siratro, Macroptilium atropurpureum (DC)** Urb. H P Krishi Dr L N Singh, Prof, **Department of Plant** Breeding and Genetics. Himachal Pradesh Krishi **Vishwavidyalaya, Palampur.**

7. Major Singh. **Quantification and mitigation of yield losses in wheat due to boundary plantation of Eucalyptus.** PAU

8. Mann Chand. **Efficacy of imazethapyr in controlling weeds in soybean - wheat + pea sequence.** HP Krishi. Dr N N Angiras, Assoc Prof, Department of Agronomy, **Himachal** Pradesh Krishi Vishwavidyalaya, Palampur

9. Pal, Nikhilchandra. **Physiological and agronomical studies on the prospect of annual cultivation of banana, Cavendish subgroup as a part of multiple cropping** system **of West Bengal.** Calcutta

10 Singh, Onkar Nath. **Studies on nitrogen economy through integrated weed management in wheat,** Triticum **aestivum L.** Narendra Deva. Dr H P Tripathi, Assoc Prof, **Department of** Agronomy, Narendra Deva University of **Agriculture and** Technology, Faizabad

11 Singh, Rajendra Kumar. **Studies on biology and management of Leucinodes orbonalis Guen on brinjal crop in Eastern U P.** Narendra Deva. Dr S M A Rizvi, Deputy Director General (PP), Uttar Pradesh Council of Agricultural Research, Lucknow

12. Singh, Ram Batuk **Studies on producton technology on rainy season onion,** Allium cepa L. Narendra Deva. Dr S B Singh, Assoc Prof, Department of Vegetable Science, Narendra Deva University of Agriculture and Technology, Faizabad

13. Singh, Tarun Prasad **Agronomic studies on sesamum, Sesamum indicum L with particular reference to plant population and nitrogen and phosphorus nutrition.** Rajendra Agri

14. Singh, Vinay. **Performance on nitrogen and spacing on yield and quality of seed of okra,** Abelmoschus esculentus (L) Moench **during kharif.** Narendra Deva Dr R D Singh, Prof and Head, Department of Vegetable Science, Narendra Deva University of Agriculture and Technology, Faizabad.

15. Tewari, Alok Kumar **Genetic studies in cowpea,** Vigna unguiculata (L) **Walp.** Narendra Deva Dr N C Gautam Prof, Department of Vegetable Science Narendra Deva University of Agriculture and Technology, Faizabad

16. Tewari, Tribhuwan Narain **Sodicity induced changes in growth, metabolism and yield of lentil,** Lens esculenta Moench. Narendra Deva Dr B B Singh, Prof and Head, Department of Crop Physiology, Narendra Deva University of Agriculture and Technology, Faizabad

17 Verma, Devendra Kumar **Studies on fertilizer management in pigeonpea,** Cajanus cajan (L) Millsp. Narendra Deva Dr D S Yadav, Senior Scientist, Department of Agronomy, Narendra Deva University of Agriculture and Technology, Faizabad

Medical Sciences

1 Anju Bala **Role of calcium antagonists on the course of** Plasmodium berghei **infection and calcium status of immuno-competent cells in the infected animals.** PGI

2. Chattopadhyay, Abichal **Further study in ageing and its management: With special reference to haematological parameters.** Gujarat Ayur Prof M S Shastry Department of Mauliksiddhant, Gujarat Ayurved University Jamnagar

3. Khan, K J Sha Nawas **Impact of chronic hyperprolactinemia on ovarian lipogenic enzymes and lipids in albino rats.** Madras

4. Mohanasundaram, J **Clinical neuropharmacological correlations of cortisol in head injury: Some aspects.** Madras

5. Raghunath, P N. **Circulating immune complexes in oral and cervical cancer.** Calicut Dr D M Vasudevan, Department of Biochemistry, Government Medical College, Trichur

6. Sadashiva Pai, K. **Development of** in vitro **assays for evaluation of neurotoxicity of environmental contaminants and industrial chemicals.** Bangalore Dr Vijayalakshmi Ravindranath, Department of Neurochemistry, National Institute of Mental Health and Neuro Sciences, Bangalore.

7. Sagnika. **A biochemical study of human chorionic villi belonging to different gestational periods.** Punjabi Dr (Mrs) Parveen Singhal, Reader, Department of Human Biology, Punjabi University, Patiala and Dr A R Sarin, Department of Gynaecology, Govt Medical College, Patiala -

8 Sambasiva Rao, P **Genetic and biochemical aspects of hypophosphatemic rickets.** Osmania.

9. Singhai, Akhlesh Kumar **Studies on the solubilization, formulation and evaluation of some drugs.** H S Gour. Prof N K Jain, College of Pharmacy, Sector III, Pushp Vihar, New Delhi.

10. Someswara Rao, Dokku **Studies on the development of new conversion systems for three industrially important microbial steroid transformations.** Andhra

11 Sukumaran, K. **Anti-cancer activity of selected medicinal plants.** Calicut Dr Ramadasan Kuttan, Amala Cancer Research Centre Amalanagar, Trichur District

12 Suresh Babu Kota Venkata Veerabhadra **Evaluation of water soluble cellulose, polymers as carriers for solid dispersions: Bio-pharmaceutical studies on solid dispersions of indomethacin and naproxen** Andhra

Zoology

1 Andal S **A study on some aspects of the effect of zinc toxicity to a teleost fish,** Sarotherodon mossambicus **Peters, 1852. Madras.**

2 Bajaj Roma **Ecological and behavioural studies on pied myna,** Sturnus contra contra **Linn in and around Kurukshetra.** Kurukshetra

3 Baharsingh, Prabodha kumar **Zooplankton as a model bioassay system for pollution studies of some inland water bodies in and around Berhampur.** Berhampur Dr Sailabala Padhi, Reader, Department of Botany, Berhampur University, Berhampur and Dr Ramesh Ch Choudhury, Lecturer, Department of Zoology, Berhampur University, Berhampur

4 Chattopadhyay Dilip Kumar **Fresh water molluscs in the economy and tradition of Bengal, India.** Calcutta

5 Choudhury N Bijaya Kumar **Eco-physiological effects of a mercury contained toxicant on a fresh water fish,** Tilapia mossambica **Peters.** Berhampur Dr A K Panigrahi, Reader, Department of Botany Berhampur University, Berhampur

6 Das, Rishi **Ecological biochemical and molecular approaches in identification of a new species,** Chironomus ramosus **Choudhury and Das with special reference to its haemoglobin system.** Dibrugarh Prof (Mrs) R Handique, Department of Life Sciences, Dibrugarh University, Dibrugarh

7 Deshmukh, Makrand Krishnarao **Studies on the neuroendocrine significance of ovarian innervation in the catfish,** Clarias batrachus **Linn.** Nagpur Dr N K Subhedar, Department of Pharmaceutical Sciences Nagpur University, Nagpur and Prof P D Prasad Rao, Department of Zoology, Nagpur University, Nagpur.

8 Dnyanoba, Khamkar Dashrath **Biology of the cestode parasites of marine fishes from West Coast of India.** Marathwada Prof (Dr) G B Shinde, Department of Zoology Marathwada University, Aurangabad

9 Gaharwar Dinesh Pratap Singh **Histo-chemistry of olfactory organs of certain fresh water fishes.** Bundelkhand Dr J P Tiwari, Bipin Bihari College, Jhansi

10 Ghanshyam Munshi Rashmi **Studies on the nucleus preopticus in relation to central nervous system and gonads in catfish,** Clarias batrachus **Linn.** Nagpur. Dr P D Prasad Rao, Head, Department of Zoology, Nagpur University, Nagpur

11. Gudadhe, S V. **Studies on some aspects of calcium and phosphate metabolism in relation to gonads in the rain quail,** Coturnix coromandelica **Gmelin.** Amravati

12. Gupta, Sunita. **Histochemical studies of lipofuscin in certain organs of insects.** Bundelkhand Dr R C Gupta, Bipin Bihari College, Jhansi.

13. Indira, R S. **Environmental perception of Kapaleeswarar Temple.** Madras.

14. Jagannadh, V **Effects of a few insect growth regulators on** Spodoptera mauritia **Boisd (Lepidoptera: Noctuidae).** Calicut. Dr V S Krishnan Nair, Department of Zoology, University of Calicut, Calicut.

15 James, T J **Protein malnourishment induced lipofuscinogenesis and lipofuscinolytic role of centrophenoxine.** Kurukshetra.

16. Janardhana Rao, Metta. **Effect of salinity and the pesticide endosulfan on the physiology of** Mytilopsis sallei. Andhra

17 Lokhande, Pandurang J **Evaluation of toxicants and environmental factor combination stress on physiology of the snail,** Bellamya bengalensis f-typica Lamarck. Amravati Dr K M Kulkarni, Lecturer, Department of Zoology, Govt Vidarbha Mahavidyalaya, Amravati

18 Manjusha, C **Studies on certain physiological aspects of nematode parasite,** Camallanus ranae. Osmania

19. Mankar, Chhaya R. **Toxicity and physiological impact of three selected pesticides on** Channa orientalis SCH. Amravati Dr K M Kulkarni, Lecturer, Department of Zoology, Govt Vidarbha Mahavidyalaya, Amravati

20. Manpreet Kaur. In vitro **effects of anthelmintics on histophysiology of some nematodes of sheep/goat.** PAU

21 Mathur, Nupur. **Morphotaxonomy of piscean cestodes and their ecological study in** Hetropneustes fossilis **Bloch.** Bundelkhand Dr A K Shrivastava, Bipin Bihari College, Jhansi

22. Munirathinam, S **Bio-ecological studies of** Triventrus albamaculatus **Distant and** Tricentrus pilosus **Ananthasubramanian and Ananthakrishnan (Homoptera: Membracidae).** Madras

23 Narayana Kurup, Deepa Kumar **Ecology of the birds of Malabar Coast and Lakshadweep.** Calicut Dr V J Zacharias, Department of Zoology, St Joseph's College, Devagiri, Calicut

24 Nasser, M. **Studies on** Cardiastethus exiguus **(Hemiptera: Anthocoridae): A predator of** Opisina arenosella **Walker, the black headed caterpiller pest of coconut.** Calicut Dr U C Abdurahiman, Department of Zoology, University of Calicut, Calicut

25. Parmod Kumar. **Ecology and behaviour of rhesus macaques,** Macaca mulatta **and hanuman langurs,** Presbytis entellus **in Shimla.** HP.

26. Pearl, Thomas Mary. **Endophragmal skeleton of decapod crustaceans: A taxonomical approach.** Madras

27. Radha, R. **Restriction fragment length polymorphism haplotypes of beta thalassaemia in Tamil Nadu.** Madras.

28. Radhakrishnan, K. **Effect of synthetic pyrethroid and organophosphorous insecticides on food and water budget in different races of** Bombyx mori L. Bangalore Dr M R Delvi Reader, Department of Zoology, Bangalore University, Bangalore

29. Rajagopal, S. **Biofouling problems in the condenser cooling circuit of a coastal power station with special reference to green mussel,** Perna viridis L. Madras.

30 Saraswati, Kanchan Chandra. **Bionomics and control of aphids on** Euryale ferox **Salisbury.** Mithila. Dr R K Mishra, Principal, M K College, Laheriasarai, Darbhanga.

31 Sharma, Yash Paul. **Studies on the changing biochemical constituents in the developing stage of** Earias vittella **Fabr (Lepidoptera: Arctiidae).** Punjabi.

32. Shukla, Sampurna Nand. **Limnological studies of the Bila Reservoir with special reference to fish production.** H S Gour. Dr V S Bais, Department of Zoology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

33 Singaravelu, G. **Studies on some aspects of the formation and nature of the spermatophore and sperm releasing mechanism in a tick,** Haemaphysalis intermedia **(Acarina: Ixodidae).** Madras.

34 Singh, Dileep Kumar. **Nature of soilbound residues of DDT and DDE and degradation of DDT, DDE and parathion under subtropical conditions.** Delhi.

35. Sreekumar, S. **Ecological studies on the birds of Karipur environs in relation to the aerodromes.** Calicut Dr D N Mathew, Department of Zoology, University of Calicut, Calicut

36 Sumangala, K. **Studies on mites associated with weeds.** Calicut Dr M A Haq, Department of Zoology, University of Calicut, Calicut

37 Suresh Babu, V **Effects of some anthelmintics on biochemical aspects of** Raillietina tetragona **Molin, 1858.** Kakatiya Dr G Raghu Ramulu, Department of Zoology, Kakatiya University, Warangal

38 Sushil Chand **Studies on the protozoan parasites of fresh water fishes of Punjab with special referenc to the cycle of development and histopathology.** Punjabi Prof Devinder Kaur, Department of Zoology, Punjabi University, Patiala

40. Thomas Sabu K **Studies on some South Indian pseudoscorpions.** Madras

41 Verma, Rudra Kumar **Histo-biochemical studies of mercurial toxicity in certain tissues of a teleost,** Tilapia mossambica **Peters.** Berhampur. Dr A K Panigrahi, Reader, Department of Botany, Berhampur University, Berhampur.

42. Vijayalakshmi **Studies on some physiological aspects of** Isoparorchis hypselobagri **Trematoda and the neurotransmitters of helminth parasites.** Osmania.

43 Viswanathan, M **Studies on the reproductive aspects of a brackish water crab,** Uca (Celuca) triangularis **Bengali (Crane 1975) of Pulicat Lake, Tamil Nadu.** Madras

Veterinary Sciences

1 Chakrabarti, Debdatta. **Biophysical studies on evaluation of bovine semen.** Calcutta

2 Chattopadhyay, Asimprasad. **Studies on different techniques for detection of clinical and latent infection of rabies virus and immune status in vaccinated individuals.** Calcutta.

3. Singh, Umesh. **Studies on the performance of various exotic breeds of sheep, Rambouillet and Merino and their crosses with local breed in Himachal Pradesh.** HP Krishi. Dr N K Manuja, Assoc Prof, Department of Animal Breeding, College of Agriculture, Palampur

Current Documentation in Education

A list of select articles culled from periodicals received in AIU Library during March 1993

EDUCATIONAL PHILOSOPHY

Joseph, P J. Forests precede civilization, but deserts succeed them. **Adult Edn and Devp 38**, 1992, 159-62.

Kenchkhuashvili, Georgy Nikolaevich. Profiles of educators. Dmitry Uznadze (1886-1950). **Prospects 21(4)**, 1991, 603-13.

Lakshmi, T K S and Yadav,M S. Education: Its evolving characteristics. **New Frontiers in Edn 22(4)**, 1992, 595-610.

Oelkers, Jurgen. The demise of socialist education? Observations on the relationship between utopia and reality in educational theory **Education 46**, 1992, 76-93.

Shils, Edward. Service of society and the advancement of learning in the twenty-first century **Minerva 30(2)**, 1992, 242-68.

EDUCATIONAL PSYCHOLOGY

Fulton, Rodney D. A conceptual model for understanding the physical attributes of learning environments. **New Directions for Adult and Continuing Edn 50**, (Summer) 1991. 13-22

Hiemstra, Roger. Aspects of effective learning environments **New Directions for Adult and Continuing Edn 50**, (Summer) 1991. 5-12.

EDUCATIONAL SOCIOLOGY

Heredia, Rudolf C Tribal education in India Reversing the downward spiral **New Frontiers in Edn 22 (4)**, 1992, 611-23

Khubchandani, L M Language ideology and education policies: Imperatives of cultural pluralism **J of Edn & Social Change 6(1)**, 1992, 29-42.

Ramirez, Blandina Cardenas Can we all get along? Examining our capacity for diversity **Ednl Record 73(4)**, 1992, 43-6

EDUCATIONAL ADMINISTRATION

Chalam, K S Privatisation. For and against **Progressive Ednl Herald 7(1)**, 1992, 38-40

Dimond, John G Faculty involvement in institutional budgeting. **New Directions for Hr Edn 19(3)**. 1991, 63-78

Ediger, Marlow. Communication and the university administrator. **Progress of Edn 67(6)**. 1992. 122-24.

Harvey, James. Footing the bill Financial prospects for higher education **Ednl Record 73(4)**, 1992, 11-7

Karad, Vishwanath D. Education system in India Need for a pragmatic approach **J of Hr Edn 16(1)**. 1992. 121-25

Patil, D Y A formula for admissions and fee-structure in private un-aided (self financing) educational institutions **J of Hr Edn 16(1)** 1992, 96-100

REPORT ON national colloquium on right to education as a fundamental right **J of Hr Edn 16(1)**, 1992 1-90

Varghese, N V. Management of change in higher education Some trends **J of Ednl Plann and Admn 5(1)**, 1991, 49-64

TEACHERS & TEACHING

Arnold, Rolf. Theoretical and practical aspects of teaching and action orientation in occupational training **Education 46**, 1992 7-38

Brand, Myles Undergraduate education Seeking the golden mean. **Ednl Record 73(4)**, 1992, 18-26.

Graf, David L and others Faculty development's role in improving undergraduate education **New Directions for Teaching and Learning 51**, (Fall) 1992, 101-9

Sisco, Burton R. Setting the climate for effective teaching and learning . **New Directions for Adult and Continuing Edn 50**, (Summer) 1991, 41-50.

EDUCATIONAL TECHNOLOGY

Albright, Michael J and Graf, David L. Instructional technology and the faculty member **New Directions for Teaching and Learning 51**, (Fall) 1992, 7-15

Bellman, Beryl L. Computer communications and learning. **New Directions for Teaching and Learning 51**, (Fall) 1992, 55-63.

Dejoy,Judith K. Incorporating microcomputer technology into adult learning environments. **New Directions for Adult and Continuing Edn 50**, (Summer) 1991, 33-40.

Head, J Thomas New directions in presentation graphics: Impact on teaching and learning. **New Directions for Teaching and Learning 51**, (Fall) 1992. 17-31.

Whalley, Peter. Making control technology work in the classroom. **British J of Ednl Tech 23(3)**, 1992, 212-21.

EDUCATIONAL EVALUATION

Tamir, Pinchas and others Scoring guidelines. **Studies in Ednl Eva 18(3)**. 1992, 355-63

ECONOMICS OF EDUCATION

Debal, Prava. Utilisation pattern of scientific and technical manpower: A study of manufacturing sectors of India. **J of Ednl Plann and Admn 5(2)**, 1991, 185-94

Dhar, Veena Impact of educational expenditure on the Naga economy **J of Ednl Plann and Admn 5(2)**, 1991, 201-6.

Levin, Henry M. Market approaches to education: Vouchers and school choice. **Eco of Edn Rev 11(4)**, 1992, 279-85.

Nigam, Navin C. Private initiative in professional education. **J of Hr Edn 16(1)**, 1992, 104-8.

Srivastava, D K and others. Some aspects of the economics of unfair means in examinations. **J of Ednl Plann and Admn 5(2)**, 1991, 157-72.

Tilak, Jandhyala B G and Varghese, N V Discriminatory pricing in education. **J of Edn and Social Change 6(1)**, 1992, 43-67.

Venkateswarlu, N. Financing education· Emerging trends. **Yojana 36(22)**, 1992, 7-8

VOCATIONAL EDUCATION

Adi Reddy, C. Management of vocational education at +2 level: The Andhra Pradesh experience **Progressive Ednl Herald 7(1)**, 1992, 70-2

ADULT EDUCATION

Brockett, Ralph G Do we really need mandatory continuing education? **New Directions for Adult and Continuing Edn 54**, (Summer) 1992. 87-93

Galbraith, Michael W and Sisco, Burton R. Model for understanding controversies in adult and continuing education. **New Directions for Adult and Continuing Edn 54**, (Summer) 1992,

Sork, Thomas J and Welock, Brenda A. Adult and continuing education needs a code of ethics. **New Directions for Adult and Continuing Edn 54**, (Summer) 1992, 115-22.

Ufer, Heinz. Adult education. Help for mastering personal crises. **Adult Edn and Devp 38**, 1992, 185-96.

SCHOOL OF CORRESPONDENCE COURSES
Andhra University : Waltair
Entrance Examination Notification June, 1993
Entrance Examination Under Modified Scheme for Liberalised Admission BA/B.Com Course without any Formal Academic Qualification

Applications are invited from the candidates residing in India for Entrance Examination for admission into Ist year B.A./B.Com Degree Courses for the academic year 1993-94 through the School of Correspondence Courses.

No minimum qualification is required to appear for Entrance Examination, except that CANDIDATES SHOULD HAVE COMPLETED 20 YEARS OF AGE by 1.7.1993. Candidates who pass the Entrance Examination are eligible for admission into Ist year B.A./B.Com. Courses in the School of Correspondence Courses only.

Applications will be issued from 5th April, 1993. Duly filled-in applications should reach this office on or before 26.4.93. Applications received after the due date of 26.4.93 will be accepted on payment of the penal fee at the following rates :

Upto 1.5.1993 (for first five days) .... Rs. 10/-

Upto 6.5.1993 (between Sixth and tenth day) Rs. 50/-

Applications received after 6.5.1993 will not be accepted with maximum penal fee.

Date of B.A. and B.Com. Entrance Examination is 13.6.1993

Under Modified Scheme of Entrance Examination, there will be four papers of one hour duration each and the examination will be conducted in two sessions on SUNDAY, the 13th June 1993 from 9.00 a.m. to 11.00 a.m. and from 2.00 p.m. to 4.00 p.m. Examination will be conducted in one centre in each district in Andhra Pradesh besides the existing centres in the jurisdiction of Andhra and Nagarjuna Universities.

Intending candidates may write to the undersigned by DESIGNATION for application form, syllabus and model question papers by sending Rs. 20/- by Demand Draft, drawn in favour of the Director, School of Correspondence Courses, Andhra University, Waltair along with one self-addressed envelope of 9" x 6" size (without affixing postal stamps)

The candidates may also remit cash at the Cash Counter in the School of Correspondence Courses towards application form. POSTAL ORDERS AND CHEQUES WILL NOT BE ACCEPTED.

The prescribed application forms, syllabus and model question papers are also available at the following two places at New Delhi and also at our 25 study Centres on payment of Rs 20/- through Demand Draft drawn in favour of the Director, School of Correspondence Courses, Andhra University, Waltair-530 003.

PLACES OF SALE OF APPLICATIONS :

(A) **At New Delhi :** (1) Sales Counter, Association of Indian Universities, A.I.U. House, 16 Kotla Marg (2) Sri Venkateswara College, Benito Jaurez Road, Dhaula Kuan, New Delhi-110 021.

(B) **Study Centres :** (1) Government College, Srikakulam, (2) M.R. College, Vizianagaram, (3) Mrs. A.V.N. College, Visakhapatnam, (4) Government College, Rajahmundry; (5) P.R. Govt. College, Kakinada, (6) Sir C.R.

Reddy College, Eluru, (7) S.R.R & C.V.R. Govt. College, Vijayawada, (8) A.C. College, Guntur, (9) D.N.R. College, Bhimavaram, (10)) A.B.M. College. Ongole, (11) Silver Jubilee College, Kurnool, (12) Indian Institute of Management and Commerce, Hyderabad, (13) A.M.A.L. College, Anakapalle, (14) R.S.R.K.R.R. College, Bobbili, (15) Noble College, Machilipatnam, (16) V.S.R. & N.V.R. College, Tenali, (17) Govt. Degree College, Narasannapeta, (18) S.G.S. College, Jaggayyapeta, (19) S.S. & N. College, Narasaraopeta, (20) S.K.B.R. College, Amalapuram, (21) V.R.S. & Y.R.N. College, Chirala, (22) V.V. & M. College, Ongole (23) Sri Sarvodaya College, Nellore, (24) B.V.K. College, Visakhapatnam, (25) K.B.N. College, Vijayawada.

Waltair **Prof. V. Abraham**
Date : 22.3.93 **DIRECTOR**

Notes :

1. The students of Introductory Course of this School need not pay Rs. 20/- towards the cost of application form, syllabus etc., and also need not send the requisition letter for the Entrance Examination application form. The School will send the necessary application form to the students of Introductory Course. However, the duly filled-in application form should be returned to the School with all necessary enclosures on or before **26.4.1993.**
2. The applicants should clearly mention whether they require Entrance Examination application form for B.A. or B.Com.
3. The Entrance Examination fee is Rs. 75/-.

SCHOOL OF CORRESPONDENCE COURSES

Andhra University : Waltair

Notification for B.A./B.Com./B.Sc. Examinations of 1993 Under Common Core Scheme

The last date for the receipt of Examination Applications together with the prescribed fees for the examinations of 1993 to be held in May/June, 1993 for the candidates appearing for B.A., B.Com., and B.Sc. Degree Examinations (under Common Core Scheme) through the School of Correspondence Courses is **15th April, 1993.** This notification applies to the candidates appearing under Common Core Scheme through the School of Correspondence Courses only.

The dates of commencement of B.A./B.Com./B.Sc. under Common Core Scheme are as follows :

Examination		Date of Commencement of Examinations
I Year B.A./B.Com./B.Sc.	:	03-06-1993
II Year B.A./B.Com./B.Sc.	.	24-05-1993
III Year B.A./B.Com/B.Sc.	:	12-05-1993

Applications received after the prescribed date will not be accepted. Incomplete and defective applications will be summarily rejected.

Examination application form and other particulars relating to the commencement of examinations, mode of payment of examination fee, list of examinations, mode of payment of examination fee etc., will be sent to all the students of the School of Correspondence Courses who are studying B.A./B.Com./B.Sc. under Common Core Scheme.

Waltair, **Prof. V. Abraham**
Date 22.3.1993 **DIRECTOR**

Sardar Vallabhbhai Regional College of Engineering & Technology, Surat-395 007
(Gujarat State)

Applications are invited separately for each of the following posts by 30-4-1993 in the prescribed form available on payment of crossed Indian Postal Order of Rs. 8/- (Rs. 2/- for SC/ST candidates of only Gujarat State on production of Caste Certificate) payable to the Principal and Secretary of this College. A self addressed envelope of 23 cms x 10 cms. size should be sent. Details regarding prescribed qualification, experience etc. will be furnished alongwith the application form

			Specialisation
(A)	**Teaching Posts :**		
(1)	**Department of Applied Mechanics :**		
(i)	Professor	Open Two Posts permanent	Advanced structural Analysis/Structural Dynamics/Computer Methods in Structural Engg./Structural Designs (RCC and Steel Structures)/Soil Mechanics and Foundation Engg./Geotechnical Engg.
(ii)	Asstt. Professor	Open Two Posts (Temporary but likely to be permanent)	-Do-
(iii)	Lecturer	Open One Post (Temporary but likely to be permanent)	Soil Mechanics/Foundation Engg./Structural Engg.
(2)	**Department of Electronics Engg. :**		
(i)	Professor of Computer Engg.	Open One Post (Temporary but likely to be permanent)	Computer Architecture and Parallel Processing/Algorithm and data structure Computer Aided Design and Computer Graphics/Computer Networking and Data Communication/Software Engg./Artificial Intelligence Expert System, etc.
(ii)	Professor of Electronics Engg.	Open One Post (Temporary but likely to be permanent)	Communication System/Telematics/Digital Communication and Signal Processing Microwave Engineering.
(iii)	Asstt. Prof of Computer Engg.	Open One Post (permanent)	Same as Professor of Computer Engineering
(iv)	Lecturer in Computer Engg.	Open One Post (permanent)	Computer Engineering.
(3)	**Department of Electrical Engg. :**		
(i)	Asstt. Professor	Open One Post (permanent)	Elect Power System/Electrical Instrumentation/Control System/Electrical Drives.
(ii)	Lecturer	Open One Post (Temporary but likely to be permanent)	Instrumentation and Measurement/Electrical machines/Power System/Energetics/Control System/Micro-Processor/Power Electronics.
(4)	**Department of Mechanical Engg. :**		
(i)	Professor	Open One Post (Temporary but likely to be permanent)	Production Engineering.
(ii)	Asstt Professor	Open One Post(Temporary but likely to be permanent)	Production Engineering.
(iii)	Lecturer	Open Two Posts permanent	Heat Power Engineering/Machine Design and Dynamics of Machines/Production Engg
(B)	**Non-Teaching Post :**		
	Dy. Registrar** (Admn./Acad)	Open One Post	** Candidates will have to appear for written test and if found successful in the test, then only will be eligible for personal interview.

Pay Scales :

1)	Professor	Rs 4500-150-5700-200-7300
2)	Asstt. Professor	Rs 3700-125-4950-150-5700
3)	Lecturer	Rs 2200-75-2800-100-4000
4)	Dy Registrar (Admn./Acad)	Rs 2200-75-2800-E B-100-4000

REGISTRAR

SARDAR VALLABHBHAI REGIONAL COLLEGE OF ENGINEERING & TECHNOLOGY,

Surat-395 007

(Gujarat State)

Applications in prescribed form are invited for the post of PRINCIPAL of the college so as to reach on or before 30-4-1993.

The application form can be had by sending Indian Postal Order of Rs. 8-00 (Rs. 2-00 for SC/ST candidate of Gujarat State only on production of Caste Certificate) drawn in favour of Principal & Secretary, S.V.R. Engineering College, Surat.

Academic Qualifications/Experience required :

(i) Ph.D with 1st class Degree at Bachelor's or Masters level in Engineering/Technology.

(ii) 10 years experience in teaching/industries/research out of which 5 years must be at the level of Professor or equivalent.

Note :

Candidates from industry/profession with required professional work of high standard recognised at National/International level equivalent to Doctorate would also be eligible

Desirable :

Administrative experience in responsible position.

Age : Not less than 45 years.

Job Responsibilities :

i) Academic and administrative management of the Institution.

ii) Policy Planning and providing academic and administrative leadership

iii) Monitoring and Evaluation of academic and research activities.

iv) Promotion of Industries-Institution interaction and R & D Work.

v) Providing consultancy services.

vi) Participation in policy planning at the Regional/National Level for development of technical education.

General Information :

1) The post carries pay scale of Rs. 6300-200-7300 besides other allowances, with benefits of G.P.F., Pension, D.C.R.G., L.T.C., Encashment of Leave, Medical reimbursement/allowance, etc.

2) Rent free unfurnished accommodation will be provided on the campus.

3) Higher start in the pay scale may be given to applicant of higher merit.

4) Conditions of qualifications/experience may be relaxed in case of exceptionally meritorious candidates.

5) Those in employment should send their applications through proper channel.

6) Candidates called for interview will be paid first class return fare by the shortest route on production of receipts/ticket.

7) Applications received after due date will not be accepted.

REGISTRAR

NIRMALA INSTITUTE OF EDUCATION

Altinho, Panaji, Goa - 403 001

Applications are invited from qualified candidates for the posts of Lecturers for the following Special Methods :

History (1)

Science (1)

Konkani (1)

Good academic record with at least 55% marks or an equivalent grade at the M.Ed. degree from an Indian University or any equivalent degree from a Foreign University.

Candidates besides fulfilling the above qualifications should have cleared the eligibility test for Lecturers conducted by the UGC, CSIR or similar test accredited by the UGC

Pay Scale : Rs. 2,200 - Rs. 4,000. Candidates should apply to the Principal, Nirmala Institute of Education, Altinho, Panaji, Goa within fifteen days from the date of publication of this advertisement.

PRINCIPAL

BIRLA INSTITUTE OF TECHNOLOGY

MESRA : RANCHI-835 215

Department of Architecture

Advt. No. 1/93 **Dated : 23.3.1993**

Applications are invited for following Faculty positions in the newly established Department of Architecture at this Institute:-

Post	Number	Qualification
Professors Pay-scale Rs 4500-7300/- Gross emoluments on minimum Rs 7,000/- approx	2	Ist class Bachelor/Master's Degree in Architecture with at least 10 years' experience in teaching/Industry/Research of which at least 5 years' must be at the level of Reader
Associate Professors/Readers Pay-scale Rs 3700-5700/- Gross emoluments on minimum Rs. 6,150/- approx.	3	Ist class Bachelor/Master's Degree in Architecture with 5 years' experience of teaching/Industry/Research/Reader
Assistant Professors/Lecturers Pay-scale Rs 2200-4000/- Gross emoluments on minimum Rs 3,750/- approx	6	Ist class Bachelor/Master's Degree in Architecture with 2 years' teaching/professional experience

The Institute Campus is fully residential and family accommodation is provided to staff on moderate rent. Other things being equal, preference will be given to SC/ST candidates.

Application on plain paper with crossed postal order of Rs. 20/- payable to the Registrar, Birla Institute of Technology, Mesra, Ranchi with complete bio-data, published work, degree and other certificates may be sent not later than April 30, 1993.

J. B. Saksena
Registrar & OSD

JADAVPUR UNIVERSITY
CALCUTTA-32

REC/N/1797/93
Dated : March 29, 1993

Employment Notification No. A2/C/2/93

The University invites applications in the prescribed form for the following posts :

A) 1. **Professor**

a) International Relations – Two posts
b) Physical Chemistry – One post
c) Physics – One post

Qualifications :
Essential : As per U.G.C. norms.

2. **Reader**

a) International Relations – One post (reserved for Scheduled Caste candidate)
b) English – One post
c) Physics – One post (reserved for Scheduled Caste candidate)

Qualifications :
Essential : As per U.G.C. norms

3. **Lecturer**

a) International Relations – One post (reserved for Scheduled Caste candidate)
b) Physics – One post (reserved for Scheduled Caste candidate)
c) English – Two posts (One post is reserved for SC candidate)
d) Mechanical Engineering – Three posts (likely to increase) (One post is reserved for SC candidate and One post is reserved for ST candidate)
e) Electrical Engineering – Four posts (One post is reserved for ST candidate)

Qualifications :
Essential : As per U.G.C. norms.

4. **Director**

Adult, Continuing Education and Extension Centre – One post

DETAILS OF ESSENTIAL AND DESIRABLE QUALIFICATIONS AND SPECIALIZATION MAY BE HAD FROM THE INFORMATION OFFICE OF THE UNIVERSITY AT THE TIME OF RECEIVING APPLICATION FORM.

Scale of Pay :

Professor/Director .	Rs. 4500-150-5700-200-7300/-
Reader :	Rs. 3700-125-4950-150-5700/-
Lecturer :	Rs. 2200-75-2800-100-4000/-

B. **Part-time Medical Specialist in the Health Centre of Jadavpur University** – One post (likely to increase)

Qualifications & Experience

Medical Graduate with Post-graduate degree or Diploma from the recognised University. Should have, preferably at least five years of experience in the specialty in an approved hospital in the capacity of holding independent charge.

Remuneration : Rs. 100/- per session of two hours in a day.

Hours of duty : 1-30 P.M. to 3-30 P.M.

No. of session - three per week.

LAST DATE OF RECEIVING APPLICATION IS 17.4.93.

Application forms are obtainable from the University Office during working hours on payment of Rs. 2/- or by post on payment of Rs. 3/- in I.P.O. inclusive of postage.

REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY
POWAI, BOMBAY 400 076

THREE-SEMESTER M. Phil. PROGRAMME IN HUMANITIES & SOCIAL SCIENCES WITH SPECIALISATION IN PLANNING & DEVELOPMENT

Programme: The HSS department at IIT Bombay is launching in July 1993 a new interdisciplinary M. Phil. programme with specialisation in PLANNING AND DEVELOPMENT. The programme aims at educating and training professionals in various aspects of decentralised development policy in the Indian context.

Eligibility: Master s Degree in Arts or Commerce with a minimum of 55% marks or equivalent letter grade

B. Tech./M.Sc. with adequate background in Social Sciences and with a minimum of 60% marks or equivalent letter grade.

Those due to appear for final examination are eligible to apply.

Admissions are open to two categories of students: [1] **Regular.** The admission of regular candidates will be through M. Phil. Entrance Test [MET '93] or with valid UGC/GATE/CSIR score. Candidates will have to appear also for an interview for final selection. The MET '93 will be held on 16 May 1993 at Bombay, Bangalore, Calcutta, Delhi, Kanpur and Madras.

The selected regular candidates will be paid the scholarship of Rs. 1800/- per month.

[II] **Sponsored.** The candidates will be selected for admission based on a separate test and interview.

Application and Brochure would be supplied on payment of Rs. 50/- by Demand Draft in favour of IIT Bombay enclosing self-addressed stamped (Postage Rs. 3/-) envelope of size 27 cm x 12 cm superscribed "Application Form for M. Phil." and can be collected against the draft during working hours from the Deputy Registrar, Academic Office, IIT., Powai Bombay 400 076 or against cash from State Bank of India, IIT Powai Branch, Bombay 400 076. The issue of application and Brochure would begin from 26th March 1993. The last date for the issue [at counter] and receipt for completed forms will be 19 April, 1993.

Supplementary Admission Notice 1993-94

A competitive Entrance Examination for admission to first year of the following Postgraduate programmes will also be held on 10th May 1993 from 10.00 a.m. at Pantnagar Centre only.

1. **Ph.D. (Hydraulics)** - 2 Seats

   Eligibility: Master's degree in Hydraulics or Water Resource Engg. in First division or an OGPA of 4.000/5.000.

2. **M.Tech. (Hydraulics)** - 2 Seats

   Eligibility: 55% marks or equivalent OGPA in Bachelor's degree or equivalent in Civil Engg.

3. **M.Sc. (Agril. Statistics)** - 2 Seats

   Eligibility: 55% marks or equivalent OGPA in B.Sc. Ag. & A.H. or B.Sc. with Physics, Chemistry and Maths, or B.Sc. with Physics, Maths and Statistics or B.A. with Maths. and Statistics.

   Note: Candidates must not have III division or less than 45% marks at any stage in their academic career to be eligible for admission in the University.

Closing date: 12-4-1993 with prescribed fee of Rs. 125/-

Detailed prospectus and application form can be obtained by sending an account payee bank draft for Rs. 25/- in favour of "PRE-ENTRANCE EXAMINATION CELL REVOLVING FUND ACCOUNT, G.B. Pant University of Agriculture and Technology, Pantnagar" on State Bank of India, Pantnagar (Branch Code 1133) or U.C.O. Bank, Pantnagar (Branch Code 678) with a self addressed envelope of 10" x 12" size bearing postage stamps of Rs. 6.00 with clear mention of programme. Cheque/Money orders/Postal orders will not be accepted.

REGISTRAR & COORDINATOR (Admissions)

INDIAN COUNCIL FOR CULTURAL RELATIONS

MAULANA AZAD ESSAY COMPETITION 1993

TOPIC : MAULANA AZAD AND SECULARISM

Last Date for Submission : 31st May, 1993

Prizes: In each language

First Prize	**Rs. 10,000/-**
Second Prize	**Rs. 7,000/-**
Third Prize	**Rs. 5,000/-**

Eligibility: All citizens of SAARC countries – India, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka below **30 years as on 22nd February 1993.**

Languages: English, Hindi or Urdu. Essay should be of 5000 words and typed in double space before submission.

Extra consideration would be given to the entries citing the source of the Quotations/ References included in the Essays.

Code of Procedure available with Indian Council for Cultural Relations, Azad Bhavan, Indraprastha Estate, New Delhi 110 002

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BOMBAY NIVEA INTERNATIONAL, Sethna Building, 216, Princess Street, Bombay 400 002
CALCUTTA GLOBAL REACH, Pustak Bhandar Compound, Govind Mitra Rd Patna 800 004
MADRAS MANCOMP SERVICES, Flat 6B, No 9 Montieth Lane, Egmore, Madras 600 008

Participation requests must reach before April 12th 1993.

Seminar/Expo organised by DECIDE PTY LTD, GPO Box 1358, Canberra 2601, Australia.

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